INDEPENDENT REMEDIAL ACTION REPORT

NATIONAL AUTO PARTS PROPERTY
SUMNER, WASHINGTON
ECOLOGY VCP PROJECT #SW1547

Prepared for:

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Prepared by

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September 3, 2020 (Updated May 19, 2021)

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DECLARATIVE STATEMENT

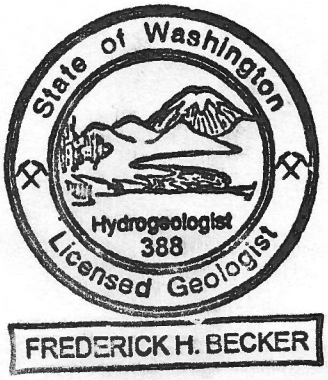
Consistent with the Model Toxics Control Act, Chapter 70.105D RCW, as implemented by the Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC, it is determined that the independent remedial actions implemented are protective of human health and the environment, attain federal and state requirements that are applicable or relevant and appropriate, comply with cleanup standards, provide for compliance monitoring, use permanent solutions to the maximum extent practicable, and provide for a reasonable restoration time-frame.

September 3, 2020 (Updated May 19, 2021)

Dylan Galloway, REA — Date
President
Galloway Environmental, Inc.

September 3, 2020 (Updated May 19, 2021)

Frederick H. Becker, LEG, LHG — Date
Senior Geologist



DEFINITIONS AND ACRONYMS

asl	above sea level
AOC	area of concern
ARAR	applicable or relevant and appropriate requirements
bgs	below ground surface
Cascade	Cascade Drilling, LP
˚C	degrees Celsius
COC	contaminant of concern
CFR	Code of Federal Regulations
COPC	contaminant of potential concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CUL	Cleanup Level
DNS	Determination of Non-Significance
Ecology	Washington State Department of Ecology
ECP	Environmental Cleanup Plan
ENCO	EnCo Environmental Company
GEI	Galloway Environmental, Incorporated
IRAR	Independent Remedial Action Report
MEK	methyl ethyl ketone
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
%	percent
PID	photoionization detector
PQL	practical quantitation limit
PVC	polyvinyl chloride
RCW	Revised Code of Washington
RI	remedial investigation
SEPA	State Environmental Policy Act
sf	square feet
SR	State Route
SU	standard unit
SVOC	semi-volatile organic compounds
TCLP	Total Characteristic Leachability Procedure
TPCHD	Tacoma Pierce County Health Department
TPH-Diesel	total petroleum hydrocarbons as diesel
TPH-Gas	total petroleum hydrocarbons as gasoline
TPH-Oil	total petroleum hydrocarbons as oil
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code
WDA	Waste Disposal Authorization

EXECUTIVE SUMMARY

This Independent Remedial Action Report (IRAR) has been prepared by Galloway Environmental, Inc. (GEI) to document the environmental cleanup of the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington, hereafter referred to as the *"Site*". This IRAR documents the results of remedial actions and subsequent groundwater monitoring that occurred at the Site between October 2017 and April 2021.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties. Pierce County lists the Site to be associated with the property listed as parcel number 0520198006, "Phil's Speed Shop, LLC", which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse.

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop from 1979 until its closure in circa October 2017.

Reportedly, an unknown quantity of spent parts cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the Site structure, near its exterior door. The Washington State Department of Ecology (Ecology) responded to a citizen complaint regarding the spill and determined that the Site was likely impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "*Work Plan*."

Environmental Cleanup Objectives

The primary objective of remediating the Site was to ensure the protection of human health and the environment by addressing environmental impacts that exceeded their respective Model Toxics Control Act (MTCA) Cleanup Levels (CULs). The selected cleanup action was based upon an evaluation of treatment alternatives from historic environmental investigations, as documented in the Work Plan and Ecology's acceptance letter to the Voluntary Cleanup Program (VCP), dated September 9, 2016.

Remedial Action Summary

Remedial excavations were conducted at the Site during two phases, including:

- From October 2017 to January 2018; and
- April 2021.

The remedial excavations were conducted in general accordance with the Work Plan and included the removal of 262.92 tons of impacted soils during the first phase of remedial actions and 249.86 tons of impacted soils during the second phase of remedial actions. The excavated soils were transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the Waste Disposal Authorization (WDA) number 2188. During the excavations, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of potential concern (COPCs) from the final limits of excavation (confirmation samples).

Soils were field screened during excavation for indications of impacts, such as petroleum odors, elevated photoionization detector (PID) measurements, and sheen. Select soil samples were analyzed for at least one of the identified COPCs, including petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbon Identification (NWTPH-HCID) method with the appropriate follow-up analyses, volatile organic compounds (VOCs) using the United States Environmental Protection Agency (USEPA) Method 8260C, semi-volatile organic compounds (SVOCs) using the USEPA Method 8270D/SIM, total MTCA metals (i.e., arsenic, cadmium, chromium, lead, and mercury) using the USEPA Method 6010C/7471B, and Total Characteristic Leachability Procedure (TCLP) using the USEPA Method 1311/6010C. For those soil samples that were selected for VOC analyses, soil sampling and field preservation methods followed the USEPA 5035A method and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". The samples exhibiting detections of petroleum with the NWTPH-HCID analytical method were further analyzed for diesel fuel and

lube oil range petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Diesel Extended (NWTPH-Dx) method.

Phase 1 Environmental Remediation (2017-2018)

During the initial remedial excavation work in October 2017, GEI collected a total of 16 soil samples from within the limits of excavation and four from stockpiles that were generated during the work. All samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-Gas), total petroleum hydrocarbons as diesel (TPH-Diesel), total petroleum hydrocarbons as oil (TPH-Oil), VOCs, and MTCA 5 Metals. Laboratory analyses resulted in the detections of one analyte (i.e., total lead) at concentrations exceeding its MTCA Method A CUL of 250 milligrams per kilogram (mg/kg) in five of the 16 excavation soil samples and one stockpile soil sample. All other analytes in all other samples were either detected at concentrations below their respective CULs or were not detected at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs). Based on these data, GEI identified the contaminant of concern (COC) for the Site soils to be total lead.

The areas of total lead exceedances that were detected during the October 2017 excavation event were further excavated between December 6, 2017 and December 10, 2017 and resampled. A total of 14 excavation soil samples and two stockpile soil samples were collected and analyzed for total lead. Of the 14 excavation soil samples, 10 resulted in detections of total lead at concentrations exceeding its MTCA Method A CUL of 250 mg/kg. Laboratory analyses of the two stockpile soil samples resulted in the detections of lead at concentrations of 220 mg/kg and 240 mg/kg.

The areas of total lead exceedances that were detected during the December 6 and 10, 2017 excavation event were further excavated between December 18, 2017 and resampled. A total of seven excavation soil samples were collected and analyzed for total lead. Of the seven excavation soil samples, three resulted in detections of total lead at concentrations exceeding its MTCA Method A CUL of 250 mg/kg.

The areas of total lead exceedances that were detected during the December 18, 2017 excavation event were further excavated on January 17, 2018 and resampled. A total of three soil samples were collected on January 17, 2018 and analyzed for total lead. Of the three soil samples, one resulted in a detection of total lead at a concentration off 12 mg/kg, below its MTCA Method A CUL of 250 mg/kg. Laboratory analyses of the other two soil samples did not result in concentrations of total lead at levels equal to or exceeding their respective laboratory PQLs.

Between August 13, 2018 and August 14, 2018, GEI observed the installation of groundwater monitoring wells MW-2 through MW-7 as noted in the Work Plan and Ecology's Opinion Letter, dated July 12, 2017. The installation included one cross/downgradient well west of the remedial excavation area (MW-2), two downgradient wells north of the remedial excavation area (MW-3 and MW-4), two cross/upgradient wells east of the remedial excavation area (MW-5 and MW-6), and one upgradient well south of the remedial excavation area (MW-7). One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015 by others.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated PID readings). GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, VOCs, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective CULs.

GEI conducted quarterly groundwater monitoring of the seven groundwater monitoring wells on August 31, 2018, December 20, 2018, March 26, 2019, July 1, 2019, and October 22, 2019 to confirm that contamination to groundwater remained absent.

Laboratory analyses of the December 20, 2018, March 26, 2019, July 1, 2019, and October 22, 2019 groundwater monitoring events resulted in the findings of COCs at concentrations either below their respective CULs or not detected at concentrations equal to or exceeding their laboratory PQLs.

Phase 2 Environmental Remediation (2021)

On February 26, 2021, GEI conducted a follow-up soil sampling event in two primary areas of concern (AOCs), including the area identified in the Work Plan as Area 6 and Area 8. Area 6 was situated immediately southeast of the southeastern corner of the Site structure and measured approximately 50 feet wide (east-west) by 30 feet long (north-south) by one foot in depth. Area 8 was situated approximately 50 feet east of the eastern edge of the Site structure and measured approximately 40 feet wide (east-west) by 40

feet long (north-south) by one foot in depth. During the sampling event, GEI segregated Area 6 into three units, each measuring approximately 16.6 feet wide (east-west) by 30 feet long (north-south). Area 8 was segregated into four quadrants, each measuring approximately 20 feet wide (east-west) by 20 feet long (north-south).

Soil samples were collected from each location based on historic laboratory analytical results.

- Soil sample number A6-12A:0.8 was collected from the western unit of Area 6 (A6) at a depth of 0.8 feet bgs in the same vicinity as soil sample number 12 (12A) where laboratory analysis of a soil sample that was collected from a depth of 0.17 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 460 mg/kg.
    - Laboratory analysis of soil sample number A6-12A:0.8 resulted in a detection of total lead at a concentration of 22 mg/kg, below the MTCA Method A CUL of 250 mg/kg, confirming that subsequent remedial action was unnecessary for lead in the western unit of Area 6.
- Soil sample numbers A6-13A:0.8 and A6-13A:1.5 were collected from the eastern unit of Area 6 (A6) at depths of 0.8 feet bgs and 1.5 feet bgs, respectively, in the same vicinity as soil sample number 13 (13A) where laboratory analysis of a soil sample that was collected from a depth of 0.17 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 700 mg/kg.
    - Laboratory analysis of soil sample number A6-13A:0.8 resulted in a detection of total lead at a concentration of 180 mg/kg, below the MTCA Method A CUL of 250 mg/kg.
    - Laboratory analysis of soil sample number A6-13A:1.5 resulted in a non-detectable concentration of total lead, confirming that subsequent remedial action was unnecessary for lead in the eastern unit of Area 6.
- Soil sample number A6-12.5A:0.8 was collected between A6-12A and A6-13A at a depth of 0.8 feet bgs.
    - Laboratory analysis of soil sample number A6-12.5A:0.8 resulted in a detection of total lead at a concentration of 360 mg/kg, confirming that subsequent remedial action was necessary for lead in the central unit of Area 6.
- Soil sample number A8-3A:0.5 was collected from the northeastern quadrant of Area 8 (A8) at a depth of 0.5 feet bgs in the same vicinity as soil sample number 3 (3A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 225 mg/kg.
    - Laboratory analysis of soil sample number A8-3A:0.5 resulted in a detection of total lead at a concentration of 250 mg/kg, confirming that subsequent remedial action was likely necessary for lead in the northeastern quadrant of Area 8.
- Soil sample numbers A8-4A:0.5 and A8-4A:1.0 were collected from the southwestern quadrant of Area 8 (A8) at depths of 0.5 feet bgs and 1.0 feet bgs, respectively, in the same vicinity as soil sample number 4 (4A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 1,870 mg/kg and cadmium at a concentration of 3.5 mg/kg.
    - Laboratory analysis of soil sample numbers A8-4A:0.5 and A8-4A:1.0 resulted in detections of total lead at concentrations of 400 mg/kg, and 390 mg/kg, respectively, confirming that subsequent remedial action was necessary for lead in the southwestern quadrant of Area 8.
    - Laboratory analysis also resulted in detections of cadmium at concentrations of 0.92 mg/kg and 0.85 mg/kg, respectively, confirming that subsequent remedial action was unnecessary for cadmium in the southwestern quadrant of Area 8.
- Soil sample numbers A8-9A:0.5 and A8-9A:1.0 were collected from the southeastern quadrant of Area 8 (A8) at depths of 0.5 feet bgs and 1.0 feet bgs, respectively, in the same vicinity as soil sample number 9 (9A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 5,140 mg/kg and cadmium at a concentration of 10.8 mg/kg.

    - Laboratory analysis of soil sample numbers A8-9A:0.5 and A8-9A:1.0 resulted in detections of total lead at concentrations of 90 mg/kg, and 120 mg/kg, respectively, confirming that subsequent remedial action was unnecessary for lead the southeastern quadrant of Area 8.
    - Laboratory analysis resulted in non-detectable concentrations of cadmium at concentrations, confirming that subsequent remedial action was unnecessary for cadmium in the southeastern quadrant of Area 8.
- Soil sample number A8-2A:0.5 was collected from the northwestern quadrant of Area 8 (A8) at a depth of 0.5 feet bgs in the same vicinity as soil sample number 2 (2A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 172 mg/kg.
    - Laboratory analysis of soil sample number A8-2A:0.5 resulted in a detection of total lead at a concentration of 120 mg/kg, confirming that subsequent remedial action was unnecessary for lead in the northwestern quadrant of Area 8.

Based on these subsequent laboratory analytical results, additional excavation occurred in April 2021 to remove residual contamination in the central unit of Area 6 and the northeastern and southwestern quadrants of Area 8. During the remedial excavations, GEI collected performance soil samples to evaluate the effectiveness of the removals and confirmation soil samples to document the remaining concentrations of total lead and/or cadmium.

The excavation at Area 6 extended to approximately 17 feet wide (east-west) by 21 feet long (north-south) by a maximum depth of 1.5 feet in the northern portion and 2.0 feet in the southern portion. Laboratory analyses of the soil samples that were collected from the final limits of excavation resulted in either detections of COPCs at concentrations below their respective MTCA Method A CULs or were not detected at concentrations equal to or exceeding their respective laboratory PQLs.

The excavation at Area 8 included the northeastern quadrant and the southwestern quadrant. The excavation in the northeastern quadrant extended to approximately 22 feet wide (east-west) by 34.5 feet long (north-south) by a maximum depth of 2.0 feet. Laboratory analyses of the soil samples that were collected from the bottom, south sidewall, west sidewall, and east sidewall resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs. Laboratory analyses of two soil samples that were collected from the northern sidewall resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further north and resampled. This process continued until concentrations of COPCs were confirmed to be below their respective MTCA Method A CULs.

The excavation in the southwestern quadrant of Area 8 extended to approximately 15 feet wide (east-west) by 31 feet long (north-south) by a maximum depth of 5.75 feet. Laboratory analyses of the soil sample that was collected from the northern sidewall resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs. Laboratory analyses of all other soil samples resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further south, east, west, and in depth, then resampled. This process continued until concentrations of COPCs were confirmed to be below their respective MTCA Method A CULs.

Because all known contaminated soil has been removed from the site, and groundwater monitoring has confirmed that contamination to groundwater is absent, GEI concludes that a No Further Action determination will be appropriate for the Site.

1.0 INTRODUCTION

This Independent Remedial Action Report (IRAR) has been prepared by Galloway Environmental, Inc. (GEI) to document the environmental cleanup of the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington, hereafter referred to as the *"Site*". This IRAR documents the results of remedial actions and confirmation groundwater monitoring that occurred at the Site during two phases: Phase 1 - October 2017 to October 2019 and Phase 2 – April 2021.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with the property listed as parcel number 0520198006, "Phil's Speed Shop, LLC", which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse.

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop from 1979 until its closure in circa October 2017.

Reportedly, an unknown quantity of spent part, cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the building near the exterior door of the Site structure. The Washington State Department of Ecology (Ecology) responded to a citizen complaint regarding the spill and determined that the Site was likely impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan (ECP) for the Site. In October 2002 EnCo completed a Limited Phase II Site Assessment by utilizing hand tools and a backhoe to access and collect subsurface soil samples for laboratory analyses. Between October 2015 and December 2015, EnCo completed a limited remedial investigation (RI) north, east, and south of the 2002 Limited Phase II Site Assessment. During the investigation, EnCo collected 25 soil samples from depths ranging from 0.5-feet below ground surface (bgs) and 10-feet bgs for laboratory analyses. EnCo also procured Holocene drilling to install groundwater monitoring well, MW-1, in the central region of the site.

Based on laboratory analyses of soil and groundwater samples that were collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "*Work Plan*." The Work Plan and associated supporting reports are included as Appendix A (Background Documents) to this report.

In an Opinion Letter prepared by Ecology, dated July 12, 2017, Ecology concurred with the remedial action approach to achieve cleanup levels at the Site via excavation. The Opinion Letter and associated supporting reports are included as Appendix A (Background Documents) to this report.

The primary objective of remediating the Site was to ensure the protection of human health and the environment by addressing environmental impacts and attaining unrestricted cleanup levels (CULs) at the Site.

1.0.1 Involved Parties

Facility Name & Address

National Auto Parts
16008 60th Street East
Sumner, Washington
Ecology Cleanup Site ID No.: 3653
Ecology Site ID: 1304
Voluntary Cleanup Program (VCP) Project ID: SW1547

Property Owners and Addresses

Sunset Chevrolet, Inc.
Mitchell Development
910 Traffic Avenue

Sumner, WA 98390

Environmental Consultant

Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, Washington 98008

Ecology Project Manager

To be determined

1.0.2 Regulatory Framework

Remediation of petroleum and petroleum constituent-impacted soil in Washington State is regulated by MTCA (Washington Administrative Code [WAC] 173-340). Generally, remediation of such sites is performed following the voluntary independent remedial action provisions of MTCA.

The approach to these cleanup services was performed in general conformance with appropriate regulatory guidance documents such as Ecology's Guidance for Remediation of Petroleum Contaminated Sites and the Work Plan by EnCo, dated May 23, 2017. The work complied with current safety, health and other relevant regulations, including:

- Occupational Safety and Health Administration (OSHA) Code of Federal Regulations (CFR) 1910.120, Hazardous Waste Operations and Emergency Responses
- WAC 296-24, General Safety & Health Standards
- WAC 296-62, WAC Occupational Health Standards
- WAC 296-800/OSHA 29 CFR 1910, WAC Core Safety & Health Standards
- WAC 296-155/OSHA 29 CFR 1926, Construction Industry Standards
- WAC 173-340, MTCA Cleanup Regulation
- WAC 173-303, Dangerous Waste Regulations
- Ecology's Guidance on Preparing Independent Remedial Action Reports under the MTCA (Chapter 70.105D Revised Code of Washington [RCW], DRAFT dated March 1, 1994, Pub. 94-18)
- EPA CFR 40, Protection of Environment
- United States Environmental Protection Agency (USEPA) SW-846 (sampling and laboratory analysis)

1.0.3 Previous Environmental Investigations

Brief summaries of previous investigations and communications are provided below. The reports associated with each summary are included in Appendix A of this report and should be reviewed in their entirety for specific details and accuracy.

February 7, 1991: Site Inspection by Ecology

On February 7, 1991, Ecology conducted a Complaint Investigation, that resulted in observations of "poor management of waste oil, solvents, caustic bath rinsate, and metal sludge" that led to contamination of nearby soils. Ecology reportedly noted the presence of oil, metal grindings and pieces, sorbent grit, and gaskets in the soil adjacent to a former concrete slab. Environmental contamination was confirmed along the perimeters of the concrete slab and throughout a runoff trench that diverted rainwater away from the structure. Ponding water, described as a "sludgy pool" measuring approximately 20-feet wide by 40-feet long, was noted to be present approximately 15-feet southeast of the southeast corner of the former concrete slab. The concrete slab was noted to be removed in the mid-1990s.

During the Complaint Investigation, Ecology collected one surface soil sample (Sample #1) from the west edge of the ponded water for analyses of pH, volatile organic compounds (VOCs), and total petroleum hydrocarbons. Total petroleum hydrocarbons were detected at a concentration of 65,360 milligrams per kilogram (mg/kg). Eighteen VOCs were detected with 5,5-dimethyl-(z)-2-hexene resulting in the highest concentration of 120 micrograms per kilogram (μg/kg). The sample was reportedly not analyzed for pH due to interference.

Ecology collected a second surface soil sample (Sample #2) from the trench along the north side

of the concrete slab for analyses of total petroleum hydrocarbons and metals (aluminum, iron, magnesium, and manganese).

Ecology collected a third surface soil sample (Sample #3) from the north side of the concrete slab for analyses of total petroleum hydrocarbons and metals (aluminum, iron, magnesium, and manganese). Total petroleum hydrocarbons were detected at a concentration of 5,420 mg/kg.

Ecology collected a fourth surface soil sample (Sample #4) from an area of standing water for analyses of total petroleum hydrocarbons. Total petroleum hydrocarbons were detected at a concentration of 19,290 mg/kg.

Ecology collected one water sample (Sample #4a) from an area of standing water, at Sample #4, for analyses of VOCs and pH.

Ecology determined that the total area impacted with petroleum hydrocarbons was approximately 500 sf in the vicinity of the concrete slab and approximately 150 sf in and near the ponding water areas. The estimated quantity of contaminated soil was calculated to be 1,950 cubic feet (72 cubic yards).

January 17, 2003: Limited Phase II Site Assessment

Between October and November of 2002, EnCo completed a Limited Phase II Site Assessment with the purpose to "determine the soil quality" in the vicinity of the former concrete slab and ponding water and with the objective to obtain updated data for the preparation of a remedial work plan.

EnCo collected 31 discrete samples over an approximate area of 950 sf utilizing hand tools and a backhoe. All samples were analyzed for total petroleum hydrocarbons as diesel (TPH-Diesel) and total petroleum hydrocarbons as oil (TPH-Oil). Twenty three of the samples were analyzed for select heavy metals. Of the 23 metals analyses, 22 were analyzed for total lead. Eight of the samples were analyzed for VOCs. Three of the samples were analyzed for pH. One of the samples was analyzed for polynuclear aromatic hydrocarbons (PAHs). And one of the samples was analyzed for semi-volatile organic compounds (SVOCs).

Nine of the 22 soil samples that were tested for total lead resulted in concentrations exceeding the MTCA Method A CUL of 250 mg/kg. Total lead concentrations that exceeded the MTCA Method A CUL ranged from 320 mg/kg at location "14A" to 910 mg/kg at location "7A". The highest concentrations of total lead were situated within six 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 CUL for total lead were identified within four inches of the ground surface (7 A, SA, 1 0A, 12A, 13A, 14A, and 19A). The remaining two soil samples (168 and 198) were collected at 3/4-feet below bgs and 1-foot bgs, respectively. Sample numbers 168 and 198 were collected from within the vicinity of the former shallow ditch, around the perimeter of the concrete slab. Laboratory analyses of the remaining analytes resulted in concentrations below their respective MTCA CULs. Laboratory analyses for pH in soil did not exceed applicable dangerous waste regulations for corrosivity.

Based on these results EnCo concluded that the total lead concentration was significantly higher (4,040 mg/kg) during the 1991 Site Inspection. The highest total lead concentration in 2002 was detected in the sample collected closest to the building (7A at 910 mg/kg).

2015: Remedial Investigation 2015

According to the Work Plan, EnCo conducted a limited RI in 2015 to further define the lateral and vertical extents and magnitude of Site contamination. The limited RI report was not obtainable by GEI for inclusion to this report. However, a summary was included in the Work Plan. According to the Work Plan, 25 shallow subsurface soil samples and one groundwater sample were collected for laboratory analyses of total TPH-Diesel, TPH-Oil, total petroleum hydrocarbons as gasoline (TPH-Gas), heavy metals, PAHs, and polychlorinated biphenyls (PCBs). Four soil samples were collected during the advancement of the borehole to install groundwater monitoring well number MW-1 at depths of 0.75-feet bgs, 2-feet bgs, 5-feet bgs, and 10-feet bgs. Upon termination of the boring for MW-1, Holocene Drilling installed a 1-inch diameter, schedule 40 polyvinyl chloride (PVC) well that was constructed with 1-inch diameter well casing from approximately 0.5-feet bgs to 3.5-feet bgs and a 20-slot (0.02-inch slots) screen from a depth of

3.5-feet bgs to 8.5-feet bgs. Immediately after installation, EnCo monitored the development of the well using a combination of surging and pumping with a peristaltic pump to remove at least four well volumes. EnCo's boring log for the MW-1 is included in Appendix B of this report.

The remaining soil samples were collected throughout the investigation at depths ranging from 1/2-foot bgs and 1-foot bgs.

Laboratory analyses resulted in the detections of arsenic and lead at concentrations exceeding their respective MTCA Method A CULs in two soil samples (sample number 4A) and (sample number 9A). Both samples were reportedly collected from a depth of 1/2-foot bgs.

Laboratory analyses also resulted in the detection of lead at a concentration exceeding its MTCA Method A CULs in a soil sample that was collected (sample number 13A) which was reportedly collected from a depth of 0.8-feet bgs.

Five soil samples were composited for Total Characteristic Leachability Procedure (TCLP) analyses of lead and cadmium to assess for exceedance of their respective hazardous waste threshold. Total leachable cadmium was measured less than 1 milligrams per liter (mg/L). Total leachable lead was measured at 1.20 mg/L. Both detections were below their respective dangerous waste thresholds.

Laboratory analyses of the groundwater sample collected from MW-1 resulted in the detections of total chromium and dissolved arsenic at concentrations of 1.33 micrograms per liter (μg/L) and 1.08 μg/L, respectively. Both detections were below their respective MTCA Method A CULs.

September 9, 2016: Acceptance of VCP Application

On September 9, 2016, Ecology notified the former Site owner, Mr. Robert Suss, that Ecology accepted the Site into the VCP.

May 23, 2017: Independent Remedial Cleanup Action Work Plan

On May 23, 2017, EnCo finalized the Work Plan to document methods and procedures to remediate reasonably accessible contaminated site soils.

Per section 4.0 of the Work Plan, the approach to remediating the environmental contamination at the Site generally included:

- Excavate approximately 500 cubic yards of impacted soils east of the existing building.
- Load, transport, and dispose approximately 171 to 314 tons of contaminated soils to an approved disposal facility.
- Collect performance and confirmation soil samples for field screening and laboratory analyses to evaluate the effectiveness of the removal of contaminants.
- Continue remedial excavations until confirmation of contaminants of concern (COCs) at levels below their respective CULs.
- Install six additional groundwater monitoring wells to provide access to shallow groundwater for long-term groundwater monitoring.
- Collect groundwater samples from the seven groundwater monitoring wells for laboratory analyses and confirmation of attaining remedial action goals for four consecutive quarters with all COCs confirmed to be less than their respective CULs.

July 12, 2017: Opinion Letter from Ecology

On July 12, 2017, Ecology issued an Opinion Letter confirming that further remedial action was necessary and concurring with the 2017 Work Plan scope to remediate the Site. In the Opinion Letter, Ecology noted that the proposed approach of excavation and off-site disposal of contaminated soils has the highest probability of contamination removal and meeting the proposed CULs.

2.0 SITE DESCRIPTION

2.0.1 Location and Legal Description

The Site is located at 16008 60th Street East in Sumner, Washington. It is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East and is approximately 0.4 miles north of SR 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with parcel number 0520198006.

2.0.2 General Site Information and History

The Site is rectangular in shape, totaling approximately 1.58 acres in size, and contains a 9,300 sf structure that was most recently used as an automobile parts supply store with a machine shop. It has been referred to as “Phil’s Speed Shop” and “Sumner National Auto Parts.”

The portions of the Site west and north of the structure are paved with asphalt. The portion of the Site east of the structure consists of soil. The portion of the Site south of the structure consists of gravel over soil.

As of the date of this report, the Site remains unoccupied.

2.0.3 Current Uses of Adjoining Properties

The northern adjoining property is 60th Street East, beyond which are commercial and residential properties occupied by Windmill Gardens (commercial) and single-family residences. The eastern adjoining property is a commercial property occupied by Sumner Veterinary Hospital. The southern adjoining property is a commercial property occupied by Kersey Mobility. The western adjoining property is 160th Avenue East, beyond which are commercial and residential properties occupied by Northwest Construction Control & Allied Enterprises, and single-family residences. The features of the Site and its vicinity are shown in Figure 2 of this report.

2.0.4 Proposed Land Use

GEI is currently unaware of any proposed changes to the land use of the Site, beyond commercial uses.

3.0 ENVIRONMENTAL SETTING

3.0.1 Regional Physiographic Conditions

The Site is situated at an elevation of approximately 77 feet above sea (asl) and gently slopes to the northwest. The highest portion of the Site is in the southeast corner and the lowest is in the northwest corner. The Site is mapped in a Flood Boundary and Floodway Map as being in "Zone C" which denotes the Site to be in an area of minimal flooding and not within a 100 year floodplain.

3.0.2 Climate

The local climate typically experiences cool, wet winters and warm, dry summers. Temperatures typically range from the high-30s (Fahrenheit) during the during winter months to the low-80s during the summer months. The mean annual precipitation ranges from 30- to 55-inches.

3.0.3 Soil/Geologic Conditions

The Site soils, as observed during previous site investigations and excavations, are described as follows:

- 0- to 1-foot bgs: inorganic silt with a mixture of irregular cobbles (Unified Soil Classification System [USCS] Classification: ML)
- 1- to 4-feet bgs: poorly graded sandy gravel fill (USCS Classification: GP)
- 4- to 10-feet bgs: grey, well sorted, medium sand (USCS Classification: SW)

3.0.4 Hydrogeologic Conditions

A total of seven groundwater monitoring wells have been installed at the Site. Groundwater monitoring well number MW-1 was installed on October 30, 2015. Groundwater monitoring well numbers MW-2 through MW-7 were installed between August 13, 2018 and August 14, 2018.

Based on quarterly groundwater monitoring events at the Site, the depth to shallow groundwater generally ranges from approximately 3.4-feet bgs in the winter months to 5.5-feet bgs in the summer months.

GEI utilized the USEPA On-Line Tools for Site Assessment Calculation to calculate the hydraulic gradient and direction for all groundwater monitoring events. Based on groundwater elevations that were collected during each groundwater monitoring event, the average groundwater flow direction is generally to the northwest at a bearing of 305 degrees from north. The table below presents the historic groundwater elevations and calculated bearing.

Sample Date	Groundwater Well – Water Elevation							Bearing (degrees from north)
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	
Aug 2018	70.79	70.57	70.69	70.72	70.83	70.82	70.95	325
Dec 2018	72.99	72.82	72.92	73.02	73.16	73.1	73.09	286
Mar 2019	72.52	72.39	72.45	72.56	72.55	72.85	72.65	314
July 2019	71.64	71.48	71.53	71.6	71.7	71.7	71.79	326
Oct 2019	71.92	71.71	71.85	72.1	72.35	72.39	72.1	275

3.0.5 Current Groundwater Use

According to the Washington State water resources map, the following groundwater resource applications/permits are associated within 1/2-miles of the Site:

1. An irrigation well was installed by JG Magee in 1946 approximately 0.33 miles south of the Site. The total depth was noted to be 150-feet. According to the map, the well is still active. This well is presumably upgradient to the Site.
2. An irrigation well was installed by W Brengman in 1951 approximately 0.42 miles southwest of the Site. The total depth was noted to be 133-feet. According to the map, the well is still active. This well is presumably upgradient to the Site.

3. An irrigation well was installed by RJ Hill in 1946 approximately 0.50 miles northwest of the Site. The total depth was noted to be 230-feet. According to the map, the well is still active. This well is presumably cross/downgradient to the Site.

No other documentation of nearby wells were identified during the completion of this report.

3.0.6 Surface Water

As noted above, the Site is situated on a Flood Boundary and Floodway Map as being Zone C which is characterized as an area of minimal flooding and not within a 100-year floodplain.

There have been no visual evidence of natural streams, wetlands, seepage, or springs throughout the Site. Surface water infiltrates the ground surface throughout the eastern and southern portions of the Site and meanders to the north as sheet flow in the western and northern portions of the Site. A shallow drainage ditch exists along the western perimeter of the Site and is oriented in a northerly direction.

The nearest surface water body, Salmon Creek, is located approximately 0.4 miles to the north of the Site.

4.0 SITE CONDITIONS AND SELECTION OF REMEDIAL ACTION

MTCA cleanup regulations require that a cleanup action must comply with CULs for selected hazardous substances, points of compliance, and applicable or relevant and appropriate requirements (ARARs) per WAC 173-340-710. The final indicator hazardous substance identified for the Site, the associated CULs, and ARARs are briefly summarized in the following sections.

The initial contaminants of potential concern (COPCs), as documented in the Work Plan, included the following:

- TPH-Gas, TPH-Diesel, and TPH-Oil in soil and groundwater
- VOCs in soil and groundwater
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) in soil and groundwater
- PCBs in soil and groundwater
- pH in soil and groundwater
- Metals in soil and groundwater
- Total suspended solids in groundwater

4.0.1 Nature and Extent Prior to Remedial Actions

Prior to initiating the remedial action, the Site COCs were identified by comparing concentrations of COPCs that were detected in soils during previous site investigations to their associated MTCA CULs. Based on historic site data, the following COCs were identified from the list of COPCs:

- Petroleum hydrocarbons as oil (oil range organics, heavy oil, and lube oil) in soil
- Metals in soil (arsenic, barium, cadmium, chromium, lead, and silver)

The areas of concern (AOCs) that were identified for remedial excavation included the areas located to the east and southeast of the Site structure and extended to a maximum depth of 5.75 feet. The total square footage of excavation was estimated to be 12,000 sf.

4.0.2 Exposure Pathways Prior to Remedial Actions

The following potential complete exposure pathways were evaluated during the preparation of the Work Plan and this report.

- Soil to groundwater
- Sediment
- Groundwater
- Surface water
- Indoor air by vapor intrusion
- Soil particulate to air
- Subsurface utility corridors
- Soil direct contact
- Terrestrial ecological evaluation

4.0.2.1 <u>Soil to Groundwater Pathway Prior to Remedial Actions</u>

The depth to groundwater ranges from approximately 3.4-feet bgs in the winter months and 5.5-feet bgs in the summer months.

Prior to the remedial actions, there was a potentially complete pathway from soil to groundwater due to the possibility of vertical migration. The future potential for a complete pathway of soil to groundwater is considered incomplete because the areas impacted with the COCs have been satisfactorily remediated.

4.0.2.2 <u>Sediment Pathway Prior to Remedial Actions</u>

Sediment was not considered a potential complete pathway due to the absence of sediment throughout the Site.

4.0.2.3 ***Groundwater Pathway Prior to Remedial Actions***

As noted above, the depth to groundwater ranges from approximately 3.4-feet bgs in the winter months and 5.5-feet bgs in the summer months.

Prior to the remedial actions, there was a potentially complete pathway to groundwater through vertical migration. The future potential for a complete pathway to groundwater is considered incomplete because the areas impacted with the COCs have been satisfactorily remediated.

4.0.2.4 ***Surface Water Pathway Prior to Remedial Actions***

Surface water was not considered a potential complete pathway due to the absence of surface water features throughout the Site.

4.0.2.5 ***Indoor Air by Vapor Intrusion Pathway Prior to Remedial Actions***

As demonstrated in the Work Plan, VOCs (including TPH-Gas and TPH-Diesel) were not historically detected at concentrations exceeding their respective CULs. Therefore, based on their absence and the complete removal of COCs, vapor intrusion is considered an incomplete exposure pathway.

4.0.2.6 ***Soil Particulate to Air Pathway Prior to Remedial Actions***

The areas where CICs were present are unpaved and pervious. Therefore, there was a potentially complete pathway of the COCs in soil particulate to air prior to implementation of the remedial action through generation of fugitive dust. The future potential for a complete pathway of soil particulate to air pathway is considered incomplete because the areas impacted with the COCs have been satisfactorily remediated.

4.0.2.7 ***Subsurface Utility Corridor Pathway Prior to Remedial Actions***

According to the Work Plan, a private sanitary sewer extends from the eastern portion of the on-site structure and extends to the southern extent of the structure at which it connects to the City of Sumner's sanitary sewer to the west of the on-site structure, along 160th Avenue East. GEI is unaware of any other subsurface utility corridors that may be present at or near the AOCs. Due to the complete remedial action of COCs at the Site, and because contamination was not found to extend to the utility corridor, the potential for a complete pathway through subsurface utility corridors is considered incomplete.

4.0.2.8 ***Soil Direct Contact Pathway Prior to Remedial Actions***

With respect to protection of human exposure through direct contact/incidental ingestion, the point of compliance is in the soils throughout the Site to a reasonable estimate of the depth of soil that could be excavated during redevelopment activities (less than 15 feet). There was a potentially complete pathway of direct-contact to the COCs in soil prior to remediation. The future potential for soil to direct-contact pathway is considered incomplete because the AOCs impacted with the COCs have been satisfactorily remediated.

4.0.2.9 ***Terrestrial Ecological Evaluation Prior to Remedial Actions***

Prior to the remedial actions, there was a likely potential for a complete exposure pathway between contaminated media and terrestrial ecological receptors.

However, the future potential for a complete pathway to terrestrial organism pathway is considered incomplete because the areas impacted with the COCs have been satisfactorily remediated. Therefore, the Site qualifies for an exclusion from further evaluation due to the absence of hazardous substances at concentrations exceeding their natural background levels as described in WAC 173-340-200 and 173-340-709.

4.0.3 ***Cleanup Levels and Points of Compliance***

The CULs for the Site COCs were identified using the criteria outlined in WAC 173-340-900 Table 740-1 Method A for Unrestricted Land Uses and Method B where Method A levels have not been established. The points of compliance for the remedial action implemented at the Site were wherever contaminants had been confirmed within the Site.

Where applicable, MTCA Method A CULs for the Site were selected based on protection of residential/unrestricted land use within a reasonable maximum exposure. The point of compliance for human exposure via direct contact and incidental ingestion as well as for protection of ecological receptors was defined as the contaminated areas throughout the AOCs to a reasonable estimate of the depth of soil that could be excavated (less than 15 feet).

4.0.3.1 ***Groundwater CULs***

The selected CULs for the COPCs in groundwater are listed below:

- TPH-Gas – 0.8 mg/L with benzene present and 1.0 mg/L with benzene absent per MTCA Method A
- TPH-Diesel – 0.5 mg/L per MTCA Method A
- TPH-Oil – 0.5 mg/L per MTCA Method A
- Benzene – 5.0 μg/L per MTCA Method A
- Toluene – 1,000 μg/L per MTCA Method A
- Ethylbenzene – 700 μg/L per MTCA Method A
- Total Xylenes – 1,000 μg/L per MTCA Method A
- Pyrene – 480 μg/L per MTCA Method B
- PCBs – 0.1 μg/L per MTCA Method A
- Dissolved Arsenic – 5.0 μg/L per MTCA Method A
- Dissolved Barium – 3,200 μg/L per MTCA Method B
- Dissolved Cadmium – 5.0 μg/L per MTCA Method A
- Dissolved Chromium – 50 μg/L per MTCA Method A
- Dissolved Lead – 15 μg/L per MTCA Method A
- Dissolved Mercury – 2.0 μg/L per MTCA Method A
- Hexavalent Chromium – 48 μg/L per MTCA Method A

4.0.3.2 ***Soil CULs***

The selected CULs for the COPCs in soil are listed below:

- TPH-Gas – 30 milligrams per kilogram (mg/kg) with benzene present and 100 mg/kg with benzene absent per MTCA Method A
- TPH-Diesel – 2,000 mg/kg per MTCA Method A
- TPH-Oil – 2,000 mg/kg per MTCA Method A
- Acetone – 72,000 mg/kg per MTCA Method B
- 2-Butanone (methyl ethyl ketone [MEK]) – 48,000 mg/kg per MTCA Method B
- Benzene – 0.03 mg/kg per MTCA Method A
- Toluene – 7.0 mg/kg per MTCA Method A
- Ethylbenzene – 6.0 mg/kg per MTCA Method A
- Total Xylenes – 9.0 mg/kg per MTCA Method A
- Anthracene – 24,000 mg/kg per MTCA Method B
- Benzo[a]pyrene – 0.1 mg/kg per MTCA Method A
- Benzo[g,h,i]perylene – 1,000 mg/kg per MTCA Method A
- Pyrene – 2,400 mg/kg per MTCA Method B
- Fluoranthene – 3,200 mg/kg per MTCA Method B
- 2-Methylnaphthalene – 320 mg/kg per MTCA Method B
- Arsenic – 20 mg/kg per MTCA Method A
- Barium – 16,000 mg/kg per MTCA Method B
- Cadmium – 2.0 mg/kg per MTCA Method A
- Chromium – 2,000 mg/kg per MTCA Method A as Chromium III
- Lead – 250 mg/kg per MTCA Method A
- Mercury – 2.0 mg/kg per MTCA Method A
- Hexavalent Chromium – 19 mg/kg per MTCA Method A

4.0.3.3 Vapor Intrusion (Soil Gas) Screening Levels

All known contamination has been successfully removed from the Property. The potential for vapor intrusion due to Site contaminants is not considered feasible. Therefore, an evaluation for CULs with respect to vapor intrusion are not warranted for the purpose of this report.

4.1 JUSTIFICATION FOR THE SELECTED REMEDIAL ACTION

The remedial action selected consisted of removing the contaminated soils at the Site where concentrations of COCs exceed their respective CULs. This action resulted in a permanent attainment of MTCA Method CULs throughout the AOCs. As noted in the July 12, 2017 Opinion Letter from Ecology, the selected remedial action provides the highest probability of contamination removal and meeting the proposed MTCA Method A and Method B CULs.

5.0 REMEDIAL ACTION SUMMARY

During the previous investigations and remedial action planning for the Site, site-specific cleanup action alternatives were considered to ensure the protection of human health and the environment. Each potential cleanup action alternative was compared with the following criteria (WAC 173-340-360[2] and [3]) and consideration of the MTCA remedy selection requirements:

- Overall Protection of Human Health and the Environment
- Compliance with Cleanup Standards
- Use of Permanent Solutions to the Maximum Extent Practicable
- Compliance with ARARs
- Provision of Compliance Monitoring
- Provision for Reasonable Restoration Time Frame

Based on the above criteria, the Owner's overall objectives, and Ecology's Opinion Letter, the cleanup action alternative selected for the Site included excavation and off-site disposal.

5.0.1 Impacted Soil Removals

Prior to removal of the impacted soils, several planning documents were prepared, including:

- VCP Acceptance by Ecology, dated September 9, 2016
- State Environmental Policy Act (SEPA) Determination of Non-Significance (DNS) by the City of Sumner, dated March 10, 2017
- Drainage & Erosion Control Report by Beyler Consulting, dated March 30, 2017
- Construction Stormwater Pollution Prevention Plan by Beyler Consulting, dated March 30, 2017
- The Work Plan by EnCo, dated May 23, 2017
- Waste Disposal Authorization (WDA) by the Tacoma Pierce County Health Department (TPCHD), dated January 22, 2018

The remedial excavations occurred over two phases. During both phases, excavated soils were transported to LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the WDA number 2188 (see Appendix C of this report).

<u>Phase 1 Remedial Excavation</u>

Phase 1 was conducted between October 2017 and January 2018 and resulted in the removal of 262.92 tons of impacted soils from the Site. The excavation activities occurred over four events (i.e., October 6, 2017, December 6, 2017, December 18, 2017, and January 17, 2018) and generally included the area east of the Site structure.

Throughout the excavation process during Phase 1, soils exhibiting the most likely presence of contamination were stockpiled and sampled for laboratory analyses. Based on analytical results of initial performance soil samples from the October 6, 2017 excavation, additional soils were excavated on December 6, 2017. Based on analytical results of performance soil samples from the December 6, 2017 excavation, additional soils were excavated on December 18, 2017. Based on analytical results of performance soil samples from the December 18, 2017 excavation, additional soils were excavated on January 17, 2018. This process is further discussed in subsequent sections of this report. The extents of excavation during October 6, 2017, December 6-10, 2017, December 18, 2017, and January 17, 2018 are depicted in Figures 3, 4, 5, and 6, respectively.

<u>Phase 2 Remedial Excavation</u>

On February 26, 2021, GEI conducted a follow-up soil sampling event in two AOCs, including the area identified in the Work Plan as Area 6 and Area 8. Area 6 was situated immediately southeast of the southeastern corner of the Site structure and measured approximately 50 feet wide (east-west) by 30 feet long (north-south) by one foot in depth.

As part of the sample collection process, Area 6 was segregated into three units, each measuring approximately 16.6 feet wide (east-west) by 30 feet long (north-south). Soil samples were collected from each unit for laboratory analyses of COPCs. Laboratory analyses confirmed that

further excavation was necessary for the central unit of Area 6, but not in the eastern or western units of Area 6.

Area 8 was segregated into four quadrants, each measuring approximately 20 feet wide (east-west) by 20 feet long (north-south). Soil samples were collected from each quadrant for laboratory analyses of COPCs. Laboratory analyses confirmed that further excavation was necessary for the northeastern and southwestern quadrants of Area 8, each referred to as Area 8, Part 3 and Area 8, Part 4, respectively. The soil sample locations and orientation of each AOC are depicted in Figure 7 of this report.

Soil samples were collected from each location based on historic laboratory analytical results.

- Soil sample number A6-12A:0.8 was collected from the western unit of Area 6 (A6) at a depth of 0.8 feet bgs in the same vicinity as soil sample number 12 (12A) where laboratory analysis of a soil sample that was collected from a depth of 0.17 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 460 mg/kg.
    - Laboratory analysis of soil sample number A6-12A:0.8 resulted in a detection of total lead at a concentration of 22 mg/kg, below the MTCA Method A CUL of 250 mg/kg, confirming that subsequent remedial action was unnecessary for lead in the western unit of Area 6.
- Soil sample numbers A6-13A:0.8 and A6-13A:1.5 were collected from the eastern unit of Area 6 (A6) at depths of 0.8 feet bgs and 1.5 feet bgs, respectively, in the same vicinity as soil sample number 13 (13A) where laboratory analysis of a soil sample that was collected from a depth of 0.17 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 700 mg/kg.
    - Laboratory analysis of soil sample number A6-13A:0.8 resulted in a detection of total lead at a concentration of 180 mg/kg, below the MTCA Method A CUL of 250 mg/kg.
    - Laboratory analysis of soil sample number A6-13A:1.5 resulted in a non-detectable concentration of total lead, confirming that subsequent remedial action was unnecessary for lead in the eastern unit of Area 6.
- Soil sample number A6-12.5A:0.8 was collected between A6-12A and A6-13A at a depth of 0.8 feet bgs.
    - Laboratory analysis of soil sample number A6-12.5A:0.8 resulted in a detection of total lead at a concentration of 360 mg/kg, confirming that subsequent remedial action was necessary for lead in the central unit of Area 6.
- Soil sample number A8-3A:0.5 was collected from the northeastern quadrant of Area 8 (A8) at a depth of 0.5 feet bgs in the same vicinity as soil sample number 3 (3A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 225 mg/kg.
    - Laboratory analysis of soil sample number A8-3A:0.5 resulted in a detection of total lead at a concentration of 250 mg/kg, confirming that subsequent remedial action was likely necessary for lead in the northeastern quadrant of Area 8.
- Soil sample numbers A8-4A:0.5 and A8-4A:1.0 were collected from the southwestern quadrant of Area 8 (A8) at depths of 0.5 feet bgs and 1.0 feet bgs, respectively, in the same vicinity as soil sample number 4 (4A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 1,870 mg/kg and cadmium at a concentration of 3.5 mg/kg.
    - Laboratory analysis of soil sample numbers A8-4A:0.5 and A8-4A:1.0 resulted in detections of total lead at concentrations of 400 mg/kg, and 390 mg/kg, respectively, confirming that subsequent remedial action was necessary for lead in the southwestern quadrant of Area 8.
    - Laboratory analysis also resulted in detections of cadmium at concentrations of 0.92 mg/kg and 0.85 mg/kg, respectively, confirming that subsequent remedial action was unnecessary for cadmium in the southwestern quadrant of Area 8.

- Soil sample numbers A8-9A:0.5 and A8-9A:1.0 were collected from the southeastern quadrant of Area 8 (A8) at depths of 0.5 feet bgs and 1.0 feet bgs, respectively, in the same vicinity as soil sample number 9 (9A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 5,140 mg/kg and cadmium at a concentration of 10.8 mg/kg.
    - Laboratory analysis of soil sample numbers A8-9A:0.5 and A8-9A:1.0 resulted in detections of total lead at concentrations of 90 mg/kg, and 120 mg/kg, respectively, confirming that subsequent remedial action was unnecessary for lead in the southeastern quadrant of Area 8.
    - Laboratory analysis resulted in non-detectable concentrations of cadmium at concentrations, confirming that subsequent remedial action was unnecessary for cadmium in the southeastern quadrant of Area 8.
- Soil sample number A8-2A:0.5 was collected from the northwestern quadrant of Area 8 (A8) at a depth of 0.5 feet bgs in the same vicinity as soil sample number 2 (2A) where laboratory analysis of a soil sample that was collected from a depth of 0.5 feet bgs during an investigation in 2002 resulted in a detection of total lead at a concentration of 172 mg/kg.

Laboratory analysis of soil sample number A8-2A:0.5 resulted in a detection of total lead at a concentration of 120 mg/kg, confirming that subsequent remedial action was unnecessary for lead in the northwestern quadrant of Area 8.

Based on these subsequent laboratory analytical results, between April 7, 2021 and April 15, 2021, GEI monitored the excavation of residual environmental impacts at Areas 6 and 8. The excavation at Area 6 extended to approximately 16 feet wide (east-west) by 21 feet long (north-south) by a maximum depth of 1.5 feet in the northern portion and 2.0 feet in the southern portion. The excavation in the northeastern quadrant of Area 8 (Area 8, Part 3) extended to approximately 22 feet wide (east-west) by 34.5 feet long (north-south) by a maximum depth of 2.0 feet. The excavation in the southwestern quadrant of Area 8 (Area 8, Part 4) extended to approximately 15 feet wide (east-west) by 31 feet long (north-south) by a maximum depth of 5.75 feet.

During the remedial excavations, GEI collected performance and confirmation soil samples to evaluate the effectiveness of removals. Laboratory analyses of the soil samples that were collected from the bottom, south sidewall, west sidewall, and east sidewall at Area 6 resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs.

Laboratory analyses of two soil samples that were collected from the northern sidewall of the excavation at Area 8, Part 3, resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further north and resampled. This process continued until concentrations of COPCs were confirmed to be below their respective MTCA Method A CULs

Laboratory analyses of the soil sample that was collected from the northern sidewall of the excavation at Area 8, Part 4, resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs. Laboratory analyses of all other soil samples resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further south, east, west, and in depth, then resampled. This process continued until concentrations of COPCs were confirmed to be below their respective MTCA Method A CULs.

Laboratory analyses of all soil samples that were collected from the final limits of excavation resulted in either detections of COPCs at concentrations below their respective MTCA Method A CULs or were not detected at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs).

The limits of excavation and associated soil sample data for the remedial excavations are included in the following figures:

- Figure 3 October 6, 2017 excavation

- Figure 4 December 6-10, 2017 excavation
- Figure 5 December 18, 2017 excavation
- Figure 6 January 17, 2018 excavation
- Figure 7 April 2021 excavation orientation
- Figure 8 April 2021 Supplemental Remedial Excavation at Area 6
- Figure 9 April 2021 Supplemental Remedial Excavation at Area 8, Part 3
- Figure 10 April 2021 Supplemental Remedial Excavation at Area 8, Part 4

5.1 CONFIRMATION SAMPLES

5.1.1 Confirmation Soil Samples

Throughout the remedial excavation activities, GEI field screened soils for indications of impacts, such as petroleum odors, elevated photoionization detector (PID) measurements, and sheen. The field screening and soil sample collection activities followed the procedures presented in Appendix D of this report.

GEI collected a total of 72 representative soil samples for laboratory analysis to document the effectiveness of the impacted soil removals and to document the concentrations of the COPCs remaining at the Site. This included 46 soil samples during the first phase of remedial excavation and 26 soil samples during the second phase off remedial excavation. All soil samples were submitted to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) for laboratory analyses.

<u>October 6, 2017 Excavation with October 10, 2017 Performance Soil Sample Analytical Results</u>

During the October 2017 remedial excavation activities, GEI collected six soil samples from the the limits of excavation and four from stockpiles that were generated during the excavation activities. Each of the 16 excavation samples and four stockpile soil samples were analyzed for TPH-Gas, TPH-Diesel, TPH-Oil, VOCs, and MTCA 5 Metals. Laboratory analyses resulted in the detections of one analyte (i.e., total lead) at concentrations exceeding its MTCA Method A CUL of 250 mg/kg in five of the 16 excavation soil samples and one stockpile soil sample. The exceedances included:

- Sample Number NAP-4@2' with total lead at a concentration of 4,400 mg/kg
- Sample Number NAP-10@0.5' with total lead at a concentration of 340 mg/kg
- Sample Number NAP-12@0.5' with total lead at a concentration of 500 mg/kg
- Sample Number NAP-14@0.5' with total lead at a concentration of 270 mg/kg
- Sample Number NAP-15@0.5' with total lead at a concentration of 1,100 mg/kg
- Sample Number SP-2 with total lead at a concentration of 280 mg/kg

These samples were collected from the northwestern, western, southwestern, and southeastern perimeters of the remedial excavation as indicated in Figure 3 of this report.

All other analytes in all other samples were either detected at concentrations below their respective CULs or were not detected at concentrations equal to or exceeding their respective laboratory PQLs. Based on these data, GEI concluded that the residual COC for the Site soils included total lead. Details regarding the October 6, 2017 actions are depicted in Figure 3 of this report.

<u>December 6, 2017 Excavation with Same Day Performance Soil Sample Analytical Results</u>

The areas of total lead exceedances that were detected during the October 6, 2017 excavation event were further excavated on December 6, 2017 and resampled. A total of 14 excavation soil samples and two stockpile soil samples were collected at the conclusion of the extended excavation and analyzed for total lead. Of the 14 excavation soil samples, 10 resulted in detections of total lead at concentrations exceeding its MTCA Method A CUL of 250 mg/kg. Laboratory analyses of the two stockpile soil samples resulted in the detections of lead at concentrations of 220 and 240 mg/kg.

The exceedances included:

- Sample Number 20@1' with total lead at a concentration of 310 mg/kg
- Sample Number 21@1' with total lead at a concentration of 420 mg/kg
- Sample Number 22@1' with total lead at a concentration of 680 mg/kg
- Sample Number 23@1' with total lead at a concentration of 1,200 mg/kg
- Sample Number 27@3' with total lead at a concentration of 410 mg/kg
- Sample Number 29@1' with total lead at a concentration of 740 mg/kg
- Sample Number 30@1' with total lead at a concentration of 1,600 mg/kg

These samples were collected from the west-central, southwest, and southeast portions of the remedial excavation as indicated in Figure 4 of this report.

December 18, 2017

The areas of total lead exceedances that were detected during the December 6, 2017 excavation event were further excavated on December 18, 2017 and resampled. Seven excavation soil samples were collected at the conclusion of the extended excavation and analyzed for total lead. Of the seven excavation soil samples, three resulted in detections of total lead at concentrations exceeding its MTCA Method A CUL of 250 mg/kg.

The exceedances included:

- Sample Number 33@2' with total lead at a concentration of 530 mg/kg
- Sample Number 34@2' with total lead at a concentration of 540 mg/kg
- Sample Number 36@2' with total lead at a concentration of 410 mg/kg

These samples were collected from the southwestern portion of the remedial excavation as indicated in Figure 5 of this report.

January 17, 2018

The areas of total lead exceedances that were detected during the December 18, 2017 excavation event were further excavated on January 17, 2018 and resampled. Three soil samples were collected on January 17, 2018 and analyzed for total lead as indicated in Figure 6 of this report. Of the three soil samples, one resulted in a detection of total lead at a concentration of 12 mg/kg, below its MTCA Method A CUL of 250 mg/kg. Laboratory analyses of the other two soil samples did not result in concentrations of total lead at levels equal to or exceeding their respective laboratory PQLs.

August 13 & 14, 2018

Between August 13, 2018 and August 14, 2018, GEI observed the installation of groundwater monitoring wells MW-2 through MW-7 as outlined in the Work Plan and Ecology's Opinion Letter, dated July 12, 2017. The installation was completed by Cascade Drilling, LP (Cascade) and included one cross/downgradient well west of the remedial excavation area (MW-2), two downgradient wells north of the remedial excavation area (MW-3 and MW-4), two cross/upgradient wells east of the remedial excavation area (MW-5 and MW-6), and one upgradient well south of the remedial excavation area (MW-7). One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015 by others. All well locations are depicted in Figure 11 of this report. Each of the six wells (MW-2 through MW-7) were constructed as 2-inch diameter, schedule 40 PVC wells with 2-inch diameter well casing and 10-slot (0.01-inch slots) screen. After the construction of the wells, each was developed by Cascade by using a combination of surging and evacuation with a submersible pump and dedicated disposable tubing to remove sediment and other debris. The details of the construction and development of each well are included below.

Well Number	Total Depth (feet bgs)[1]	Screen Interval (feet)	Sandpack Interval (feet)	Depth to water (feet)[2]	Approximate Development Volume (gallons)
MW-2	13.81	3.81 – 13.81	1.75 – 14.0	5.53	15
MW-3	13.64	3.64 – 13.64	1.65 – 14.0	5.91	15

MW-4	13.80	3.80 – 13.80	1.75 – 14.0	5.68	15
MW-5	14.30	4.30 – 14.30	2.25 – 14.5	5.67	15
MW-6	14.12	4.12 – 14.12	2.0 – 14.5	5.58	15
MW-7	13.87	3.87 – 13.87	1.75 – 14.0	5.25	15

Notes:

1 – The depths are based on the ground surface at the time of drilling
2 – Depths to water as measured at the time of drilling

During the drilling activities, GEI field screened the soils for indications of environmental impacts as described above and collected one soil sample from each boring at a depth immediately above the groundwater interface for laboratory analyses of TPH-Gas, TPH-Diesel, TPH-Oil, VOCs, PAHs, PCBs, MTCA 5 Metals, and Hexavalent Chromium.

At each sample point, the driller advanced an 18-inch long split spoon sampling device which was advanced by repeatedly dropping a 140-pound drop hammer onto the sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied containers.

Laboratory analyses of all soil samples resulted in either detections of COPCs at concentrations below their respective MTCA CULs or no detections at concentrations equal to or exceeding their respective laboratory PQLs.

The Laboratory analytical results are included in Appendix E.

<u>April 7, 2021 and April 15, 2021</u>

The areas confirmed to contain residual contamination during the February 2021 supplemental sampling event were excavated between April 7, 2021 and April 15, 2021. The laboratory analytical results for the February 2021 supplemental sampling event are depicted in Figure 7 of this report.

The excavation at Area 6 extended to approximately 16 feet wide (east-west) by 21 feet long (north-south) by a maximum depth of 1.5 feet in the northern portion and 2.0 feet in the southern portion. Five confirmation soil samples were collected from the final limits of excavation. Laboratory analyses of all confirmation soil samples confirmed that residual concentrations of the COPC (lead) for Area 6 were below the MTCA Method A CUL. The orientation and confirmation soil sample analytical results are depicted in Figure 8 of this report.

The excavation in the northeastern quadrant of Area 8 (Area 8, Part 3) extended to approximately 22 feet wide (east-west) by 34.5 feet long (north-south) by a maximum depth of 2.0 feet. Laboratory analyses of the soil samples that were collected from the bottom, south sidewall, west sidewall, and east sidewall resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs. Laboratory analyses of two soil samples that were collected from the northern sidewall resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further north and resampled. This process continued until concentrations of COPCs were confirmed to be below their respective MTCA Method A CULs. The orientation and confirmation soil sample analytical results for Area 8, Part 3 are depicted in Figure 9 of this report.

The excavation in the southwestern quadrant of Area 8 (Area 8, Part 4) extended to approximately 15 feet wide (east-west) by 31 feet long (north-south) by a maximum depth of 5.75 feet. Laboratory analyses of the soil sample that was collected from the northern sidewall resulted in confirmation that residual concentrations of COPCs were below their respective MTCA Method A CULs. Laboratory analyses of all other soil samples resulted in concentrations of COPCs exceeding their respective MTCA Method A CULs. Upon confirmation that contamination remained, the excavation was expanded further south, east, west, and in depth, then resampled. This process continued until concentrations of COPCs were confirmed to be below their

respective MTCA Method A CULs. The orientation and confirmation soil sample analytical results for Area 8, Part 4 are depicted in Figure 10 of this report.

Because all known contaminated soil has been removed from the site, and groundwater monitoring has confirmed that contamination to groundwater is absent, GEI concludes that a No Further Action determination will be appropriate for the Site.

5.1.2 Confirmation Water Samples

Approximately two weeks after installation of the wells, GEI initiated groundwater monitoring of the seven groundwater monitoring wells. The groundwater monitoring program continued over five quarters (August 31, 2018, December 20, 2018, March 26, 2019, July 1, 2019, and October 22, 2019).

GEI purged water from each well prior to sample collection until confirmation of attaining stabilized water quality parameters, including pH within 0.1 standard unit (SU), conductivity within 5-percent (%), and temperature within 0.1 degrees Celsius (˚C) for at least three consecutive readings. Stabilized water quality parameters are indicative of fresh formation water present in each well.

The October 22, 2019 monitoring event was the fourth consecutive quarterly groundwater monitoring event that confirmed residual concentrations of COCs were below their respective MTCA CULs. Therefore, GEI terminated the monitoring program and initiated preparation of this report. Laboratory analytical results are included in their individual reports as Appendix F.

5.1.3 Confirmation Air Samples (Vapor Intrusion Samples)

The known source of contamination has been successfully removed from the Site. Therefore, the potential for vapor intrusion due to on-site environmental impacts is not considered feasible due to the absence of a potential source.

6.0 CONCLUSIONS

Between October 2017 and January 2018 and in April 2021, remedial excavations were conducted at the Site in general accordance with the Work Plan prepared by EnCo, dated May 23, 2017 and the Opinion Letter prepared by Ecology, dated July 12, 2017. The excavated soils were transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the WDA number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of COPCs from the final limits of excavation (confirmation samples). Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been removed from the Site.

The results of confirmation soil and quarterly groundwater samples confirmed that there are no residual concentrations of contaminants at the Site at concentrations exceeding their respective CULs.

Therefore, GEI concludes that a No Further Action determination will be appropriate for the Site.

7.0 LIMITATIONS

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based upon the facts currently available within the limits of the existing data, scope of work, budget and schedule and may undergo revision as additional data are obtained. To the extent that more definitive conclusions are desired by the client than are warranted by the currently available facts, it is specifically GEI's intent that the conclusions and recommendations stated in our report is intended as guidance and not necessarily a firm course of action except where explicitly stated as such. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This report was prepared for the use of the Client and the findings presented in this IRAR are based upon the agreed scope of work outlined in the report and the Contract for Professional Services between Client and Galloway Environmental, Inc. ("Consultant"). Use or misuse of this report, or the reliance upon the findings hereof by any parties other than the Client, is at their own risk. Neither Client nor Consultant make any representations or warranty to such other parties as to the accuracy or completeness of this report or to the suitability of its use by such other parties for any purpose whatever, known or unknown to Client or Consultant. Neither Client nor Consultant shall have any liability to or indemnifies or holds harmless third parties for any losses incurred by the actual or purported use or misuse of this report.

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ATTACHMENT 1

FIGURES

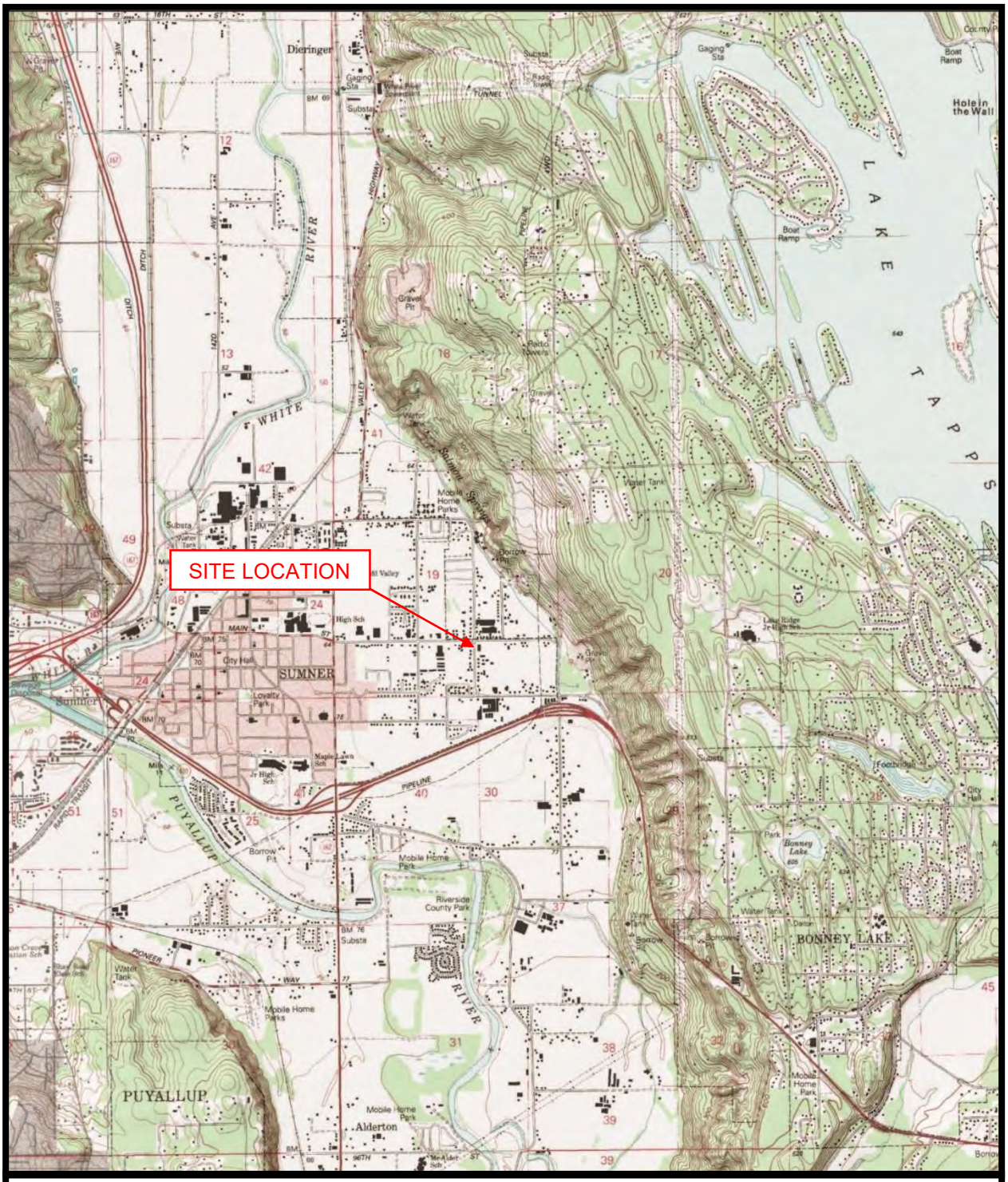

FIGURE 1 — SITE LOCATION MAP

National Auto Parts Property

16008 60th Street East, Sumner, WA
Source: topozone.com; March 2020; GEI Project #37018

0 0.5 1
miles

Galloway Environmental, Inc.

N

FIGURE 2 — SITE VICINITY MAP

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 100 ft 200 ft 400 ft
(Approximate)

Galloway Environmental, Inc.

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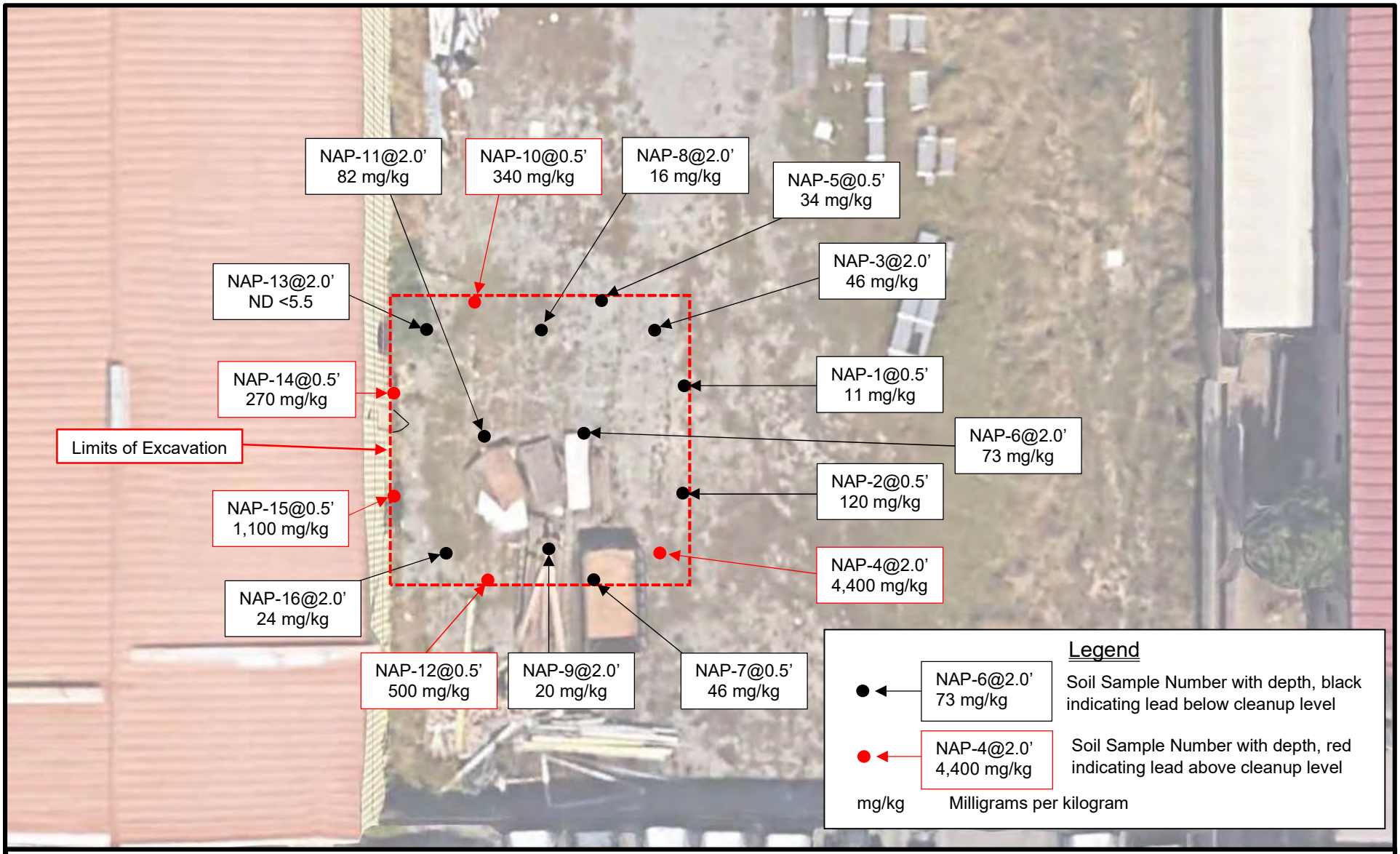


FIGURE 3 — OCTOBER 6, 2017 REMEDIAL EXCAVATION

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft
(Approximate)

Galloway Environmental, Inc.

N

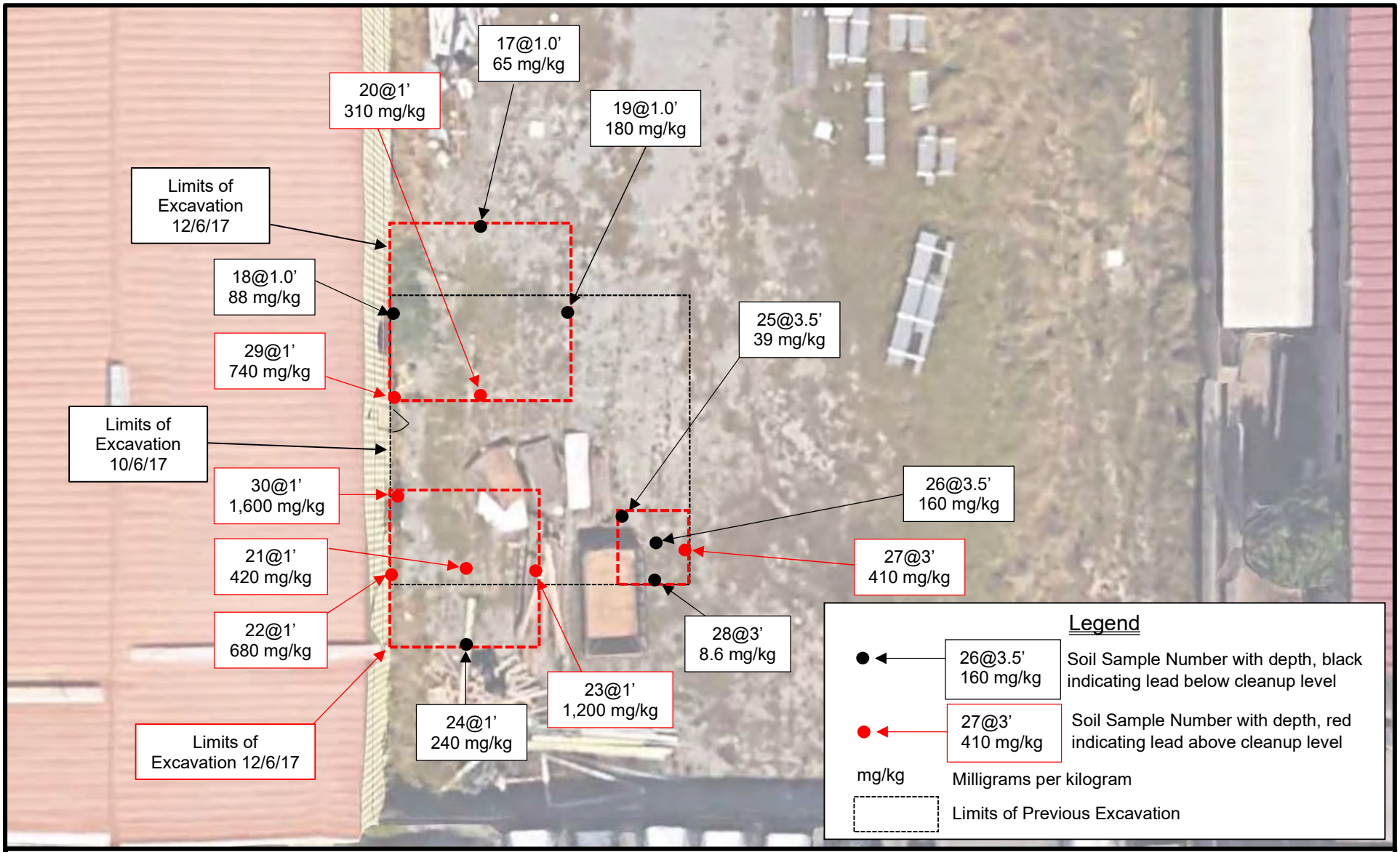


FIGURE 4 — DECEMBER 6, 2017 REMEDIAL EXCAVATION

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft
(Approximate)

Galloway Environmental, Inc.

N

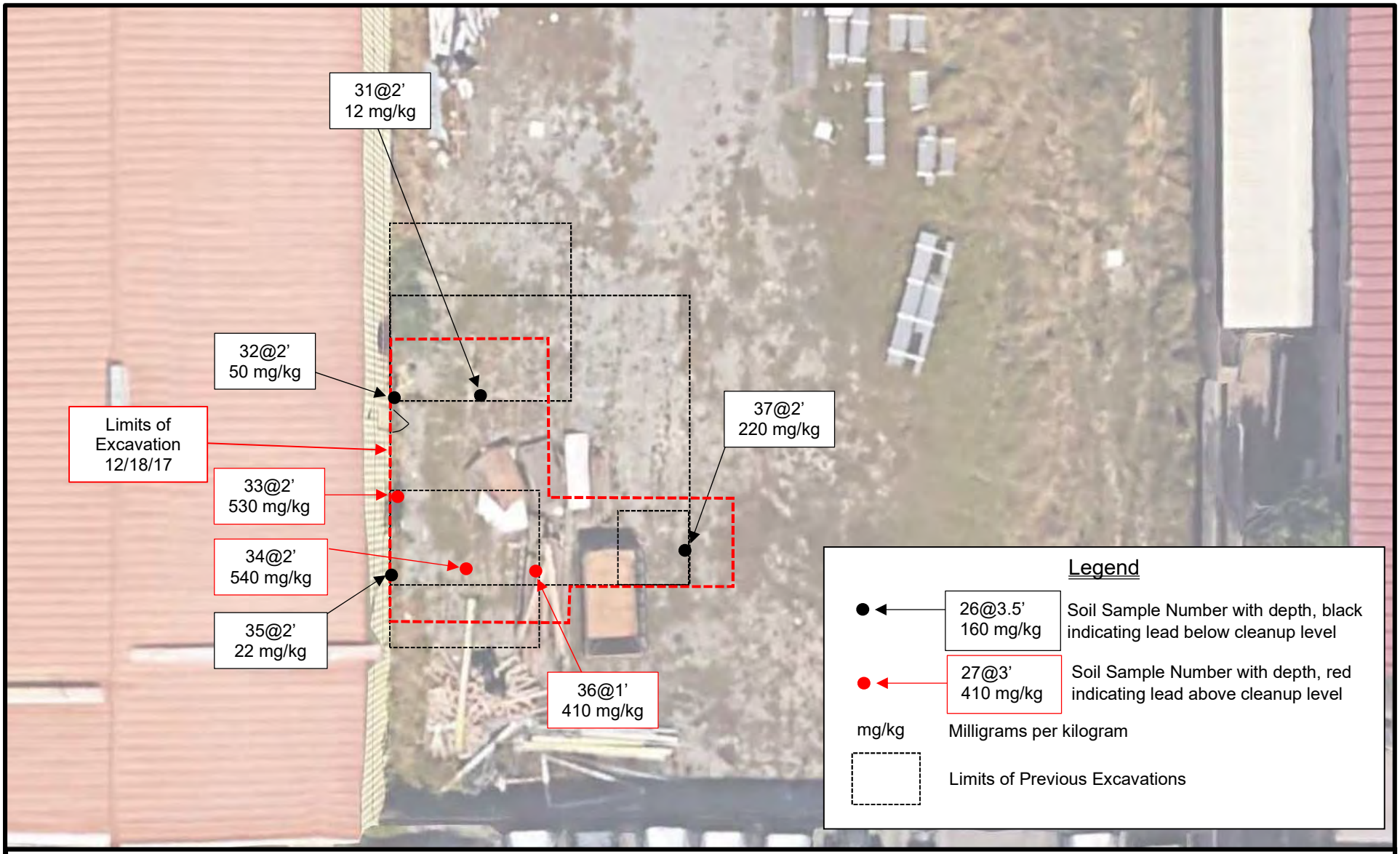


FIGURE 5 — DECEMBER 18, 2017 REMEDIAL EXCAVATION

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft
(Approximate)

Galloway Environmental, Inc.

N

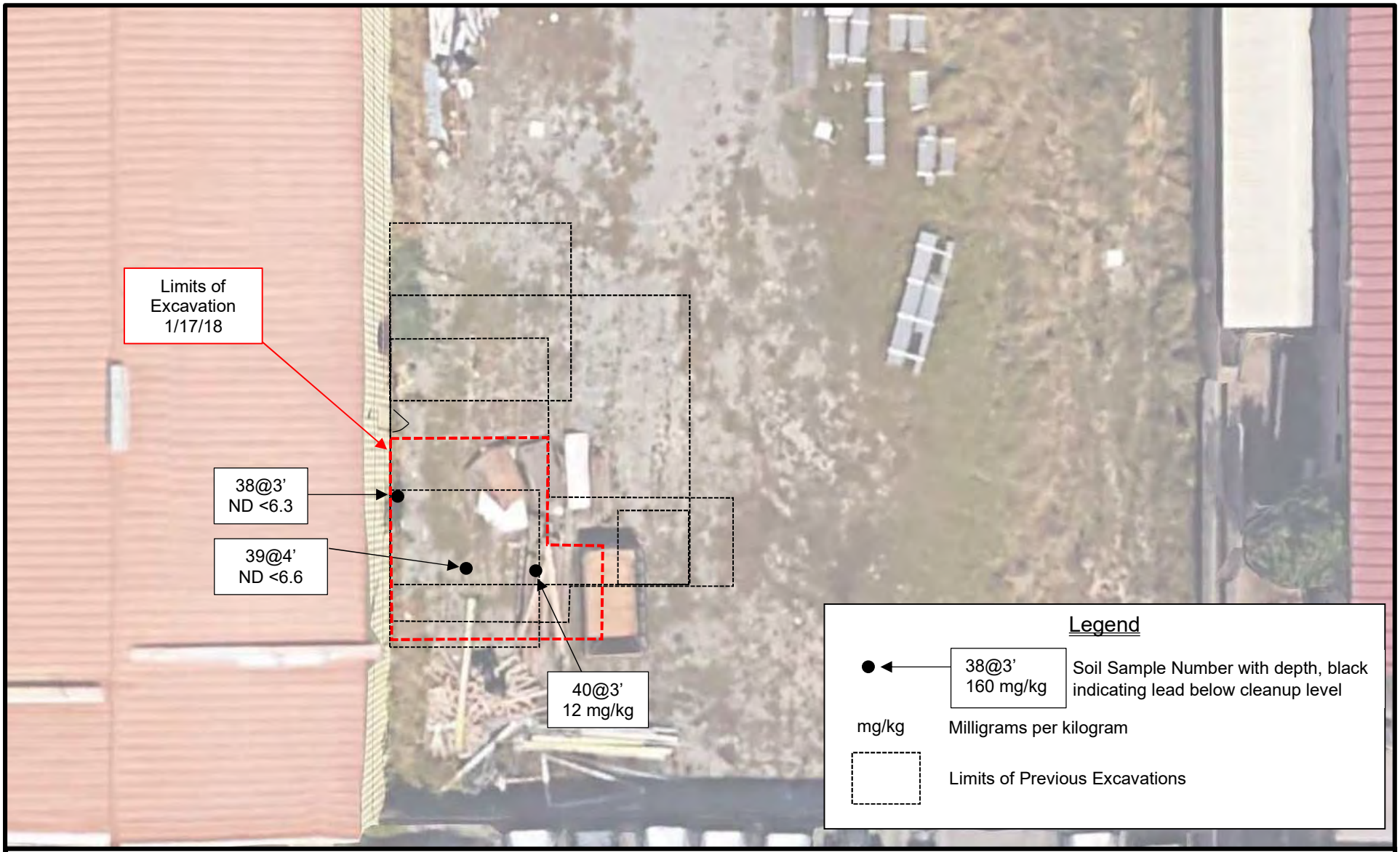


FIGURE 6 — JANUARY 17, 2018 REMEDIAL EXCAVATION

National Auto Parts Property

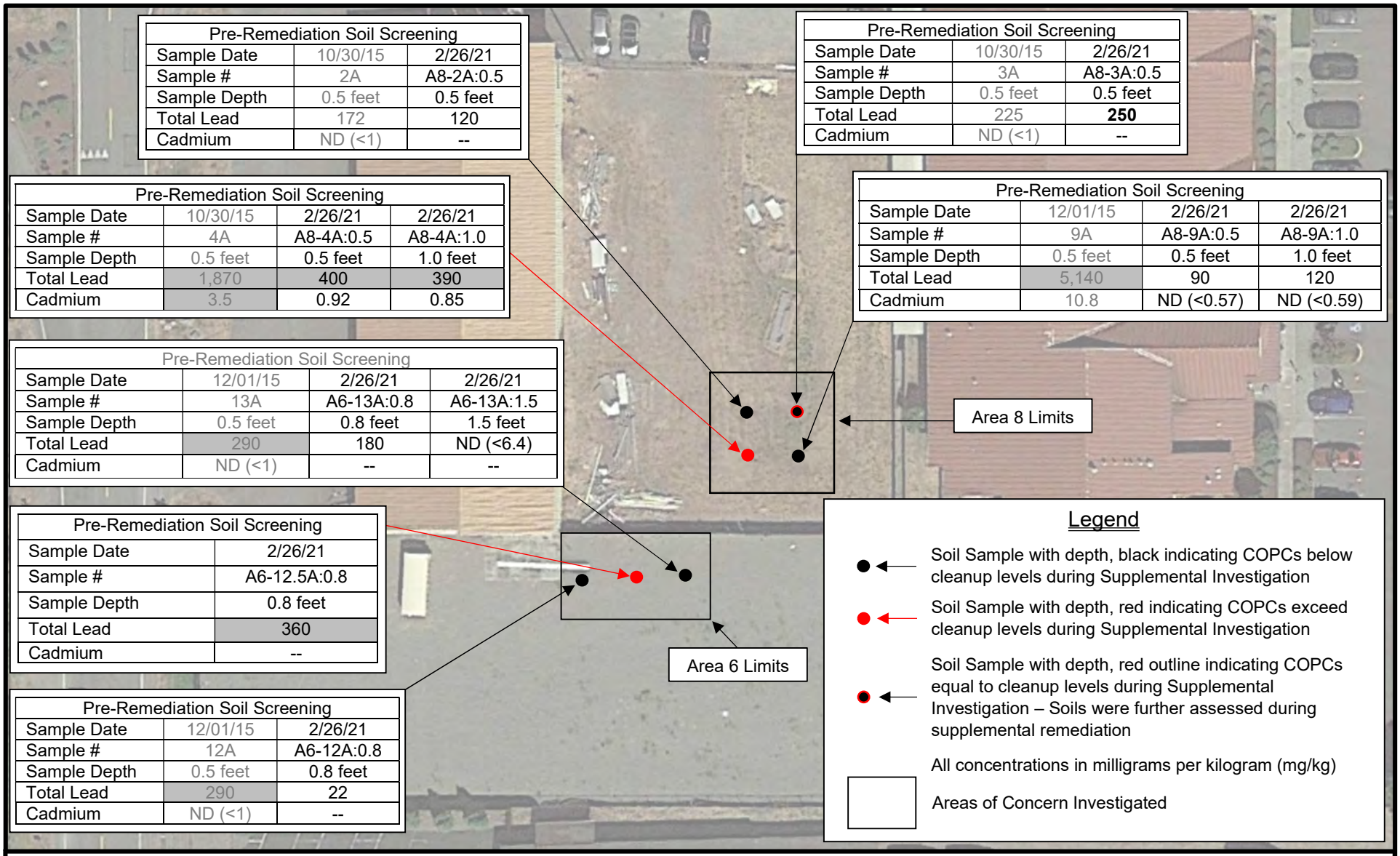
16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft
(Approximate)

Galloway Environmental, Inc.

N



Pre-Remediation Soil Screening		
Sample Date	10/30/15	2/26/21
Sample #	2A	A8-2A:0.5
Sample Depth	0.5 feet	0.5 feet
Total Lead	172	120
Cadmium	ND (<1)	--

Pre-Remediation Soil Screening		
Sample Date	10/30/15	2/26/21
Sample #	3A	A8-3A:0.5
Sample Depth	0.5 feet	0.5 feet
Total Lead	225	**250**
Cadmium	ND (<1)	--

Pre-Remediation Soil Screening			
Sample Date	10/30/15	2/26/21	2/26/21
Sample #	4A	A8-4A:0.5	A8-4A:1.0
Sample Depth	0.5 feet	0.5 feet	1.0 feet
Total Lead	1,870	400	390
Cadmium	3.5	0.92	0.85

Pre-Remediation Soil Screening			
Sample Date	12/01/15	2/26/21	2/26/21
Sample #	9A	A8-9A:0.5	A8-9A:1.0
Sample Depth	0.5 feet	0.5 feet	1.0 feet
Total Lead	5,140	90	120
Cadmium	10.8	ND (<0.57)	ND (<0.59)

Pre-Remediation Soil Screening			
Sample Date	12/01/15	2/26/21	2/26/21
Sample #	13A	A6-13A:0.8	A6-13A:1.5
Sample Depth	0.5 feet	0.8 feet	1.5 feet
Total Lead	290	180	ND (<6.4)
Cadmium	ND (<1)	--	--

Pre-Remediation Soil Screening	
Sample Date	2/26/21
Sample #	A6-12.5A:0.8
Sample Depth	0.8 feet
Total Lead	360
Cadmium	--

Pre-Remediation Soil Screening		
Sample Date	12/01/15	2/26/21
Sample #	12A	A6-12A:0.8
Sample Depth	0.5 feet	0.8 feet
Total Lead	290	22
Cadmium	ND (<1)	--

FIGURE 7 — FEBRUARY 2021 SUPPLEMENTAL INVESTIGATION & ORIENTATIONS OF AREAS 6 & 8

National Auto Parts Property

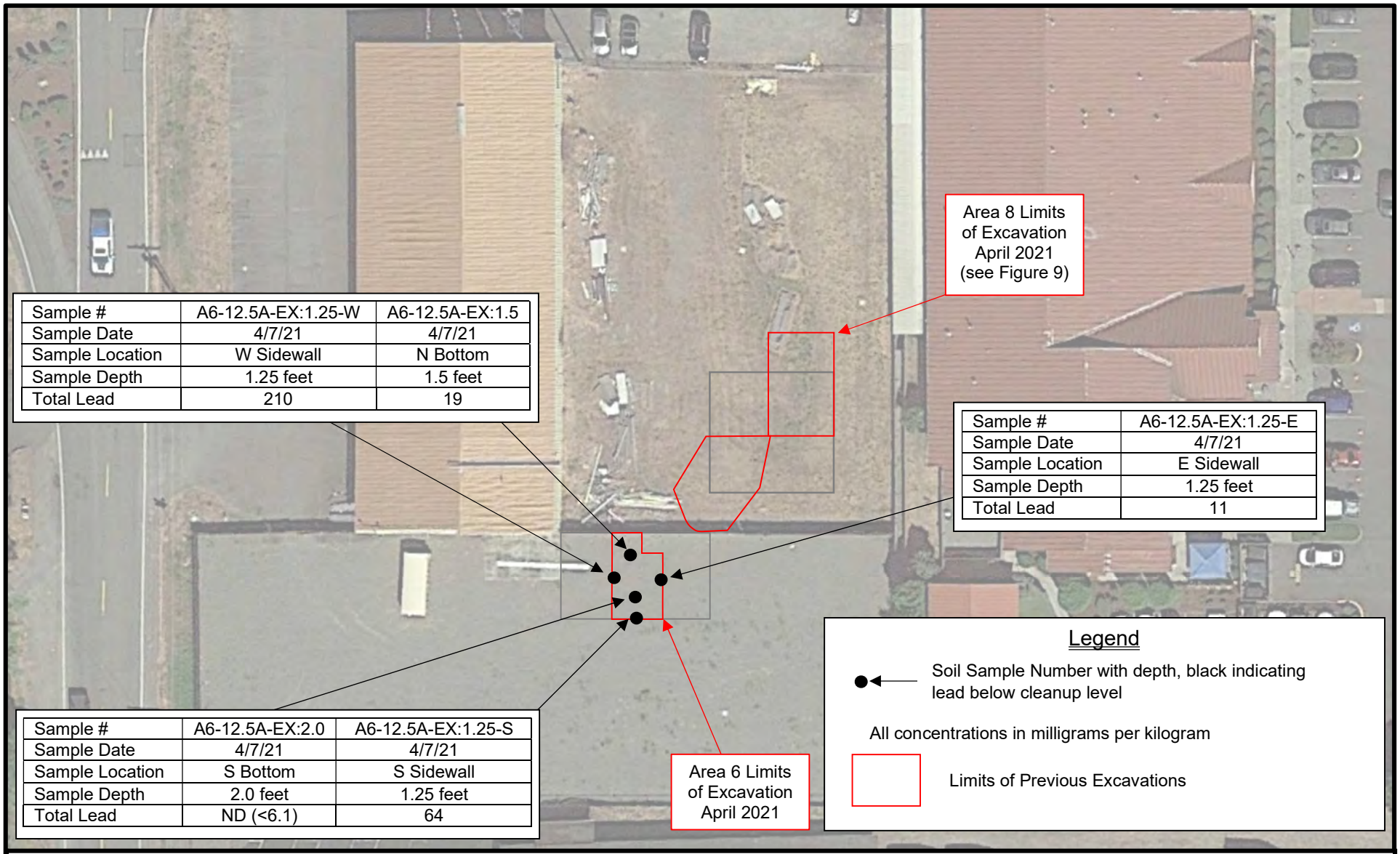
16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft 100 ft
(Approximate)

Galloway Environmental, Inc.

N



Sample #	A6-12.5A-EX:1.25-W	A6-12.5A-EX:1.5
Sample Date	4/7/21	4/7/21
Sample Location	W Sidewall	N Bottom
Sample Depth	1.25 feet	1.5 feet
Total Lead	210	19

Sample #	A6-12.5A-EX:1.25-E
Sample Date	4/7/21
Sample Location	E Sidewall
Sample Depth	1.25 feet
Total Lead	11

Sample #	A6-12.5A-EX:2.0	A6-12.5A-EX:1.25-S
Sample Date	4/7/21	4/7/21
Sample Location	S Bottom	S Sidewall
Sample Depth	2.0 feet	1.25 feet
Total Lead	ND (<6.1)	64

FIGURE 8 — APRIL 2021 SUPPLEMENTAL REMEDIAL EXCAVATION AT AREA 6

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft 100 ft
(Approximate)

Galloway Environmental, Inc.

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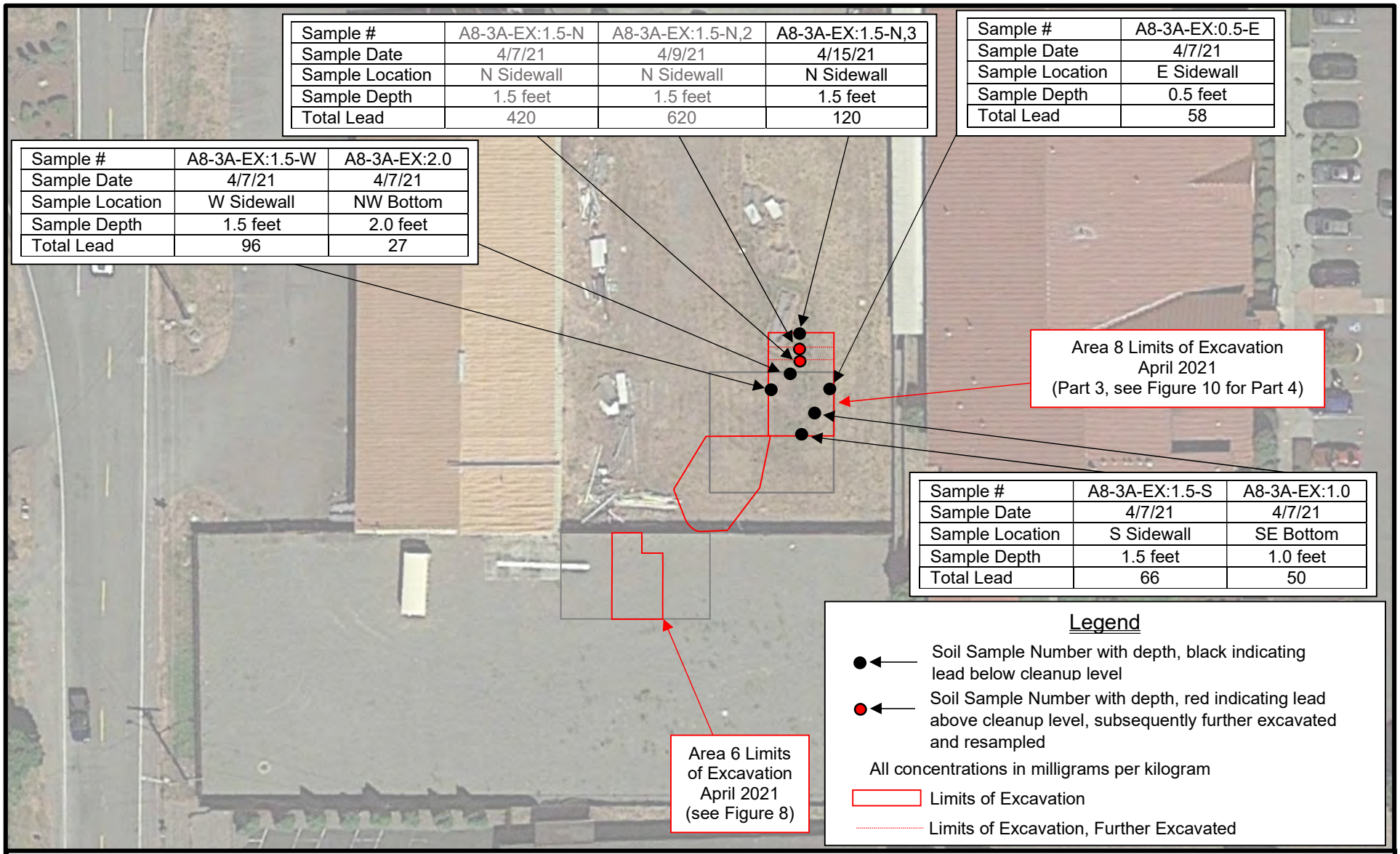


Sample #	A8-3A-EX:1.5-N	A8-3A-EX:1.5-N,2	A8-3A-EX:1.5-N,3
Sample Date	4/7/21	4/9/21	4/15/21
Sample Location	N Sidewall	N Sidewall	N Sidewall
Sample Depth	1.5 feet	1.5 feet	1.5 feet
Total Lead	420	620	120

Sample #	A8-3A-EX:0.5-E
Sample Date	4/7/21
Sample Location	E Sidewall
Sample Depth	0.5 feet
Total Lead	58

Sample #	A8-3A-EX:1.5-W	A8-3A-EX:2.0
Sample Date	4/7/21	4/7/21
Sample Location	W Sidewall	NW Bottom
Sample Depth	1.5 feet	2.0 feet
Total Lead	96	27

Sample #	A8-3A-EX:1.5-S	A8-3A-EX:1.0
Sample Date	4/7/21	4/7/21
Sample Location	S Sidewall	SE Bottom
Sample Depth	1.5 feet	1.0 feet
Total Lead	66	50

FIGURE 9 — APRIL 2021 SUPPLEMENTAL REMEDIAL EXCAVATION AT AREA 8; PART 3

National Auto Parts Property

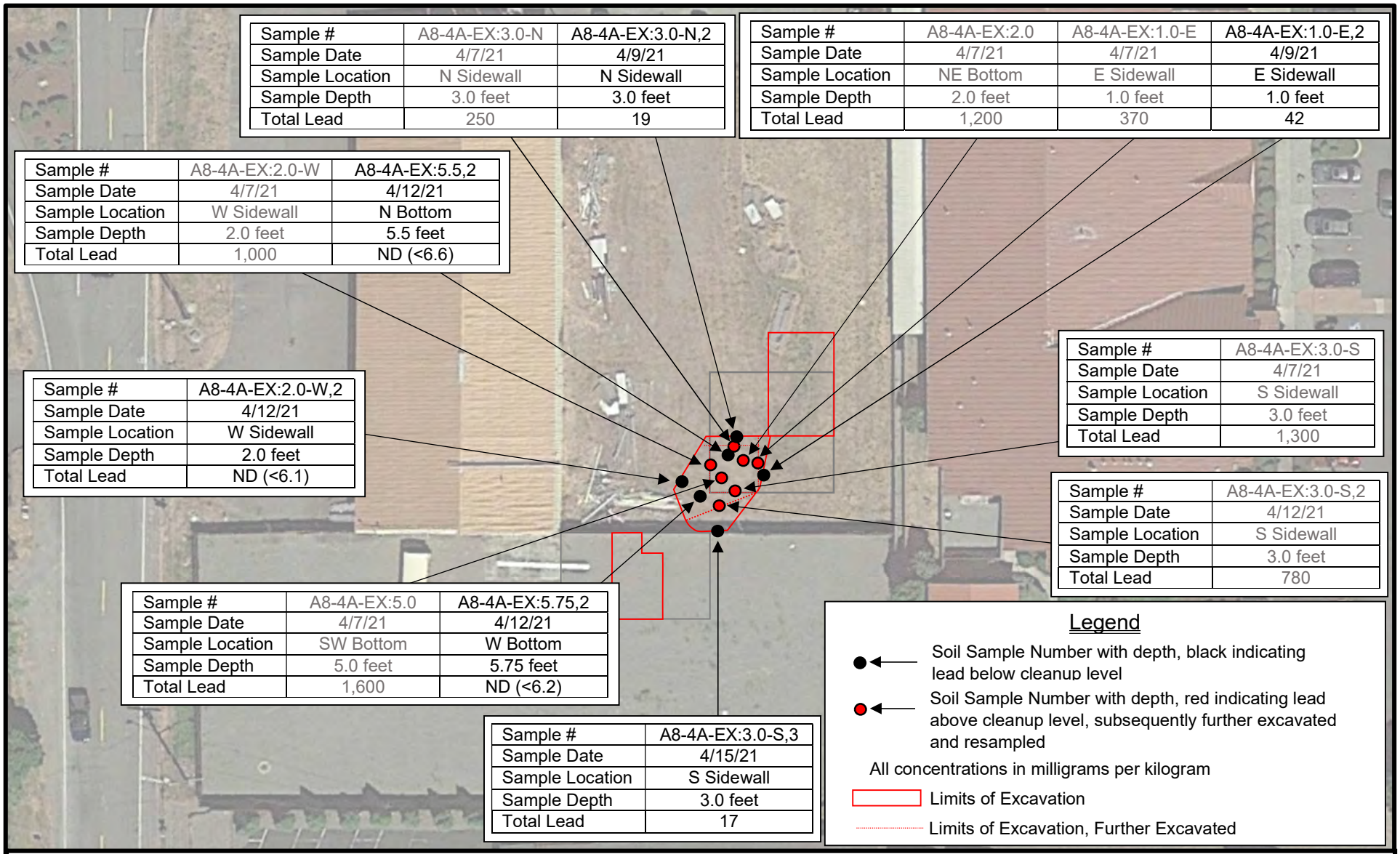
16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft 100 ft
(Approximate)

Galloway Environmental, Inc.

N



Sample #	A8-4A-EX:3.0-N	A8-4A-EX:3.0-N,2
Sample Date	4/7/21	4/9/21
Sample Location	N Sidewall	N Sidewall
Sample Depth	3.0 feet	3.0 feet
Total Lead	250	19

Sample #	A8-4A-EX:2.0	A8-4A-EX:1.0-E	A8-4A-EX:1.0-E,2
Sample Date	4/7/21	4/7/21	4/9/21
Sample Location	NE Bottom	E Sidewall	E Sidewall
Sample Depth	2.0 feet	1.0 feet	1.0 feet
Total Lead	1,200	370	42

Sample #	A8-4A-EX:2.0-W	A8-4A-EX:5.5,2
Sample Date	4/7/21	4/12/21
Sample Location	W Sidewall	N Bottom
Sample Depth	2.0 feet	5.5 feet
Total Lead	1,000	ND (<6.6)

Sample #	A8-4A-EX:3.0-S
Sample Date	4/7/21
Sample Location	S Sidewall
Sample Depth	3.0 feet
Total Lead	1,300

Sample #	A8-4A-EX:2.0-W,2
Sample Date	4/12/21
Sample Location	W Sidewall
Sample Depth	2.0 feet
Total Lead	ND (<6.1)

Sample #	A8-4A-EX:3.0-S,2
Sample Date	4/12/21
Sample Location	S Sidewall
Sample Depth	3.0 feet
Total Lead	780

Sample #	A8-4A-EX:5.0	A8-4A-EX:5.75,2
Sample Date	4/7/21	4/12/21
Sample Location	SW Bottom	W Bottom
Sample Depth	5.0 feet	5.75 feet
Total Lead	1,600	ND (<6.2)

Sample #	A8-4A-EX:3.0-S,3
Sample Date	4/15/21
Sample Location	S Sidewall
Sample Depth	3.0 feet
Total Lead	17

FIGURE 10 — APRIL 2021 SUPPLEMENTAL REMEDIAL EXCAVATION AT AREA 8; PART 4

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft 100 ft
(Approximate)

Galloway Environmental, Inc.

N

FIGURE 11 — GROUNDWATER MONITORING WELL NETWORK

National Auto Parts Property

16008 60th Street East, Sumner, WA

Source: GoogleEarth, 2020; GEI Project #37018

0 ft 25 ft 50 ft 100 ft

(Approximate)

Galloway Environmental, Inc.

N

ATTACHMENT 2

TABLES

Table 1
Laboratory Analytical Results
Remediation Soil Samples
Nat'l Auto Parts, Sumner, WA
GEI Project #37018

				Analyte																											
				Total Petroleum Hydrocarbons (mg/kg)			Volatile Organic Compounds (mg/kg)						Semi-Volatile Organic Compounds (mg/kg)													Metals (mg/kg)					
Sample Number	Sample Date	Sample Depth (ft bgs)	Lab Report ID	Gasoline	Diesel	Lube Oil	Acetone	2-Butanone	Benzene	Toluene	Ethylbenzene	Xylenes	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[j,k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Indeno[1,2,3-cd]pyrene	2-Methylnaphthalene	Arsenic	Cadmium	Chromium III	Lead	Mercury	Notes
NAP-1@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 52	ND< ##	--	--	--	--	--	--	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 0.0069	ND< 10	ND< 0.52	18	11	ND< 0.26	
NAP-2@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 26	140	ND< 0.0056	ND< 0.0056	ND< 0.0011	ND< 0.0056	ND< 0.0011	ND< 0.0033	--	--	--	--	--	--	--	--	--	--	--	--	ND< 10	ND< 0.52	31	120	ND< 0.26	
NAP-3@2'	10/10/17	2.0	1710-134	ND< 22	ND< 56	ND< ##	--	--	--	--	--	--	0.020	0.0086	0.037	0.044	0.054	0.039	0.021	0.057	0.0083	0.091	0.038	0.0077	ND< 11	ND< 0.56	25	46	ND< 0.28	
NAP-4@2'	10/10/17	2.0	1710-134	ND< 25	ND< 110	880	0.0085	ND< 0.0067	ND< 0.0013	ND< 0.0067	ND< 0.0013	ND< 0.0040	--	--	--	--	--	--	--	--	--	--	--	--	ND< 12	6.5	54	**4,400**	ND< 0.31	Further excavated and resampled
NAP-5@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 52	ND< ##	ND< 0.0054	ND< 0.0054	ND< 0.0011	ND< 0.0054	ND< 0.0011	ND< 0.0033	--	--	--	--	--	--	--	--	--	--	--	--	ND< 10	ND< 0.52	27	34	ND< 0.26	
NAP-6@2'	10/10/17	2.0	1710-134	ND< 22	ND< 30	220	--	--	--	--	--	--	ND< 0.0072	ND< 0.0072	0.0082	0.0090	0.018	0.013	ND< 0.0072	0.015	ND< 0.0072	0.016	0.011	0.012	ND< 11	1.4	21	73	ND< 0.27	
NAP-7@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 52	ND< ##	ND< 0.0051	ND< 0.0051	ND< 0.0010	ND< 0.0051	ND< 0.0010	ND< 0.0030	--	--	--	--	--	--	--	--	--	--	--	--	ND< 10	ND< 0.52	16	46	ND< 0.26	
NAP-8@2'	10/10/17	2.0	1710-134	ND< 23	ND< 58	ND< ##	--	--	--	--	--	--	ND< 0.0078	ND< 0.0078	ND< 0.0078	ND< 0.0078	0.011	ND< 0.0078	ND< 0.0078	0.0089	ND< 0.0078	0.011	ND< 0.0078	ND< 0.0078	ND< 12	ND< 0.58	16	16	ND< 0.29	
NAP-9@2'	10/10/17	2.0	1710-134	ND< 25	ND< 63	ND< ##	--	--	--	--	--	--	ND< 0.0084	ND< 0.0084	ND< 0.0084	ND< 0.0084	0.013	ND< 0.0084	ND< 0.0084	0.015	ND< 0.0084	0.010	ND< 0.0084	0.013	ND< 13	ND< 0.63	16	20	ND< 0.31	
NAP-10@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 53	ND< ##	ND< 0.0056	ND< 0.0056	ND< 0.0011	ND< 0.0056	ND< 0.0011	ND< 0.0033	--	--	--	--	--	--	--	--	--	--	--	--	ND< 11	ND< 0.53	27	**340**	ND< 0.26	Further excavated and resampled
NAP-11@2'	10/10/17	2.0	1710-134	ND< 25	ND< 62	ND< ##	ND< 0.0053	ND< 0.0053	ND< 0.0011	ND< 0.0053	ND< 0.0011	ND< 0.0032	--	--	--	--	--	--	--	--	--	--	--	--	ND< 12	ND< 0.62	19	82	ND< 0.31	
NAP-12@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 53	420	--	--	--	--	--	--	0.014	0.013	0.041	0.054	0.085	0.094	0.024	0.058	0.013	0.10	0.055	0.020	ND< 11	ND< 0.53	35	**500**	ND< 0.26	Further excavated and resampled
NAP-13@2'	10/10/17	2.0	1710-134	ND< 22	ND< 55	ND< ##	0.033	ND< 0.0059	ND< 0.0012	ND< 0.0059	ND< 0.0012	ND< 0.0036	--	--	--	--	--	--	--	--	--	--	--	--	ND< 11	ND< 0.55	20	ND< 5.5	ND< 0.28	
NAP-14@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 44	350	ND< 0.0058	ND< 0.0058	ND< 0.0012	ND< 0.0058	ND< 0.0012	ND< 0.0035	--	--	--	--	--	--	--	--	--	--	--	--	ND< 10	0.76	33	**270**	ND< 0.26	Further excavated and resampled
NAP-15@0.5'	10/10/17	0.5	1710-134	ND< 21	ND< 66	460	--	--	--	--	--	--	ND< 0.0070	ND< 0.0070	0.035	0.035	0.058	0.018	0.018	0.036	0.013	0.031	0.052	0.056	ND< 11	1.4	76	**1,100**	ND< 0.26	Further excavated and resampled
NAP-16@2'	10/10/17	2.0	1710-134	ND< 25	ND< 62	ND< ##	0.18	0.027	ND< 0.0012	ND< 0.0058	ND< 0.0012	ND< 0.0035	--	--	--	--	--	--	--	--	--	--	--	--	ND< 12	ND< 0.62	17	24	ND< 0.31	
17@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	65	--	
18@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	88	--	
19@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	180	--	
20@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**310**	--	Further excavated and resampled
21@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**420**	--	Resample of NAP-12@0.5' after further excavation
22@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**680**	--	Further excavated and resampled
23@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,200**	--	Further excavated and resampled
24@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	240	--	
25@3.5'	12/6/17	3.5	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	39	--	
26@3.5'	12/6/17	3.5	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	160	--	Resample of NAP-4@2.0' after further excavation
27@3'	12/6/17	3.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**410**	--	Further excavated and resampled
28@3'	12/6/17	3.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.6	--	
29@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**740**	--	Resample of NAP-14@0.5' after further excavation
30@1'	12/6/17	1.0	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,600**	--	Resample of NAP-15@0.5' after further excavation
31@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	--	Resample of 20@1' after further excavation
32@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50	--	Resample of 29@1' after further excavation
33@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**530**	--	Resample of 30@2' after further excavation
34@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**540**	--	Resample of 21@1' after further excavation
35@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	--	Resample of 22@1' after further excavation
36@1'	12/18/17	1.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**410**	--	Resample of 23@1' after further excavation
37@2'	12/18/17	2.0	1712-198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	220	--	Resample of 27@3' after further excavation
38@3'	1/17/18	3.0	1801-199	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND< 6.3	--	Resample near 33@2' after further excavation
39@4'	1/17/18	4.0	1801-199	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND< 6.6	--	Resample of 34@2' after further excavation
40@3'	1/17/18	3.0	1801-199	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	--	Resample of 36@1' after further excavation
SP-1	10/10/17	N/A	1710-134	ND< 22	ND< 27	130	ND< 0.0062	ND< 0.0062	ND< 0.0012	ND< 0.0062	ND< 0.0012	ND< 0.0037	--	--	--	--	--	--	--	--	--	--	--	--	ND< 11	ND< 0.54	21	170	ND< 0.27	Exported
SP-2	10/10/17	N/A	1710-134	ND< 21	ND< 45	160	--	--	--	--	--	--	ND< 0.0070	ND< 0.0070	0.011	0.012	0.021	0.037	ND< 0.0070	0.017	ND< 0.0070	0.023	0.017	0.023	ND< 10	ND< 0.52	24	**280**	ND< 0.26	Exported
SP-3	10/10/17	N/A	1710-134	ND< 21	ND< 52	270	ND< 0.0082	ND< 0.0082	ND< 0.0016	ND< 0.0082	ND< 0.0016	ND< 0.0049	--	--	--	--	--	--	--	--	--	--	--	--	ND< 10	ND< 0.51	20	90	ND< 0.26	Exported
SP-4	10/10/17	N/A	1710-134	ND< 21	ND< 48	240	--	--	--	--	--	--	0.007	0.0076	0.020	0.023	0.038	0.040	0.013	0.031	ND< 0.0071	0.040	0.029	0.013	ND< 11	0.94	28	210	ND< 0.27	Exported
SP-5	12/6/17	N/A	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	240	--	Exported
SP-6	12/6/17	N/A	1712-078	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	220	--	Exported
MTCA Cleanup Level				**30/100[a]**	**2,000**	**2,000**	**72,000[b]**	**48,000[b]**	**0.03**	**7.0**	**6.0**	**9.0**	**NVE**	**24,000[b]**	**NVE**	**0.1**	**NVE**	**1,000**	**NVE**	**NVE**	**NVE**	**3,200[b]**	**NVE**	**320[b]**	**20**	**2.0**	**2,000**	**250**	**2.0**	

Notes:

µg/L	Micrograms per liter
mg/L	Milligrams per liter
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
0.91	Shaded gray and **bold** result indicates exceedance of MTCA Method A Action Level
a	Model Toxics Control Act (MTCA) Method A Action Level is 800 mg/L when benzene is present at a site
--	Not Analyzed
b	MTCA Cleanup Level as MTCA Method B, Non-Cancer

Table 2
Laboratory Analytical Results
Soil Samples
Focused Soils Investigation
16008 60th Street East
Sumner, Washington
GEI Project #37018
Sample Collection Date February 26, 2021

Sample Number	Depth (feet below ground surface)	Metals (mg/kg)		Notes
		Total Lead	Cadmium	
A8-3A:0.5	0.5	250	--	Previous lab results (2015) indicated 225 mg/kg for lead and no detection for cadmium
A8-4A:0.5	0.5	**400**	0.92	Previous lab results (2015) indicated 1,870 mg/kg for lead and 3.5 mg/kg for cadmium
A8-4A:1.0	1.0	**390**	0.85	
A8-9A:0.5	0.5	90	ND <0.57	Previous lab results (2015) indicated 5,140 mg/kg for lead and 10.8 mg/kg for cadmium
A8-9A:1.0	1.0	120	ND <0.59	
A8-2A:0.5	0.5	120	--	Previous lab results (2015) indicated 172 mg/kg for lead and no detection for cadmium
A6-12A:0.8	0.8	22	--	Previous lab results (2015) indicated 228 mg/kg for lead and no detection for cadmium
A6-13A:0.8	0.8	180	--	Previous lab results (2015) indicated 290 mg/kg for lead and no detection for cadmium
A6-13A:1.5	1.5	ND <6.4	--	
A6-12.5A:0.8	0.8	**360**	--	
MTCA Method A Action Level		**250**	**2.0**	

Notes:

mg/kg	Milligrams per kilogram
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
PID	Photoionization detector
*	MTCA Method A Cleanup Level is 30 mg/kg with benzene present and 100 mg/kg without benzene present
400	Bold value indicates exceedance of respective MTCA Method A Cleanup Level
--	Not analyzed

Table 3
Select Laboratory Analytical Results
for Soil Samples During Subsequent Remediation
Independent Remedial Action Report
16008 60th Street East
Sumner, Washington
GEI Project #37018

Sample Number	Sample Date	Depth (feet below ground surface)	Metals (mg/kg)		Notes
			Total Lead	Cadmium	
3A	10/30/2015	0.5	225	ND <1.0	Soil sampling by others (December 2015), prior to removals
A8-3A:0.5	2/26/2021	0.5	250	--	Initial soil sampling (February 2021), prior to removals
A8-3A-EX:1.0	4/7/2021	1.0	50	--	Confirmation soil sample, SE bottom of excavation; Post excavation
A8-3A-EX:2.0	4/7/2021	2.0	27	--	Confirmation soil sample, NW bottom of excavation; Post excavation
A8-3A-EX:1.5-S	4/7/2021	1.5	66	--	Confirmation soil sample, S sidewall of excavation; Post excavation
A8-3A-EX:1.5-N	4/7/2021	1.5	**420**	--	Performance soil sample, N sidewall of excavation; Further excavated
A8-3A-EX:1.5-N,2	4/9/2021	1.5	**620**	--	Performance soil sample, N sidewall of excavation; Further excavated
A8-3A-EX:1.5-N,3	4/15/2021	1.5	120	--	Confirmation soil sample, N sidewall of excavation; Post excavation
A8-3A-EX:1.5-W	4/7/2021	1.5	96	--	Confirmation soil sample, W sidewall of excavation; Post excavation
A8-3A-EX:0.5-E	4/7/2021	0.5	58	--	Confirmation soil sample, E sidewall of excavation; Post excavation
4A	10/30/2015	0.5	1,870	**3.5**	Soil sampling by others (December 2015), prior to removals
A8-4A:0.5	2/26/2021	0.5	**400**	0.92	Initial soil sampling (Februrary 2021)
A8-4A:1.0	2/26/2021	1.0	**390**	0.85	Initial soil sampling (Februrary 2021)
A8-4A-EX:2.0	4/7/2021	2.0	**1,200**	1.7	Performance soil sample, NE bottom of excavation; Further excavated
A8-4A-EX:5.0	4/7/2021	5.0	**1,600**	2.0	Performance soil sample, SW bottom of excavation; Further excavated
A8-4A-EX:5.5,2	4/12/2021	5.5	ND <6.6	ND <0.66	Confirmation soil sample, N bottom of excavation; Post excavation
A8-4A-EX:5.75,2	4/12/2021	5.75	ND <6.2	ND <0.62	Confirmation soil sample, W bottom of excavation; Post excavation
A8-4A-EX:3.0-S	4/7/2021	3.0	**1,300**	**2.1**	Performance soil sample, S sidewall of excavation; Further excavated
A8-4A-EX:3.0-S,2	4/12/2021	3.0	**780**	1.4	Performance soil sample, S sidewall of excavation; Further excavated
A8-4A-EX:3.0-S,3	4/15/2021	3.0	17	ND <0.60	Confirmation soil sample, S sidewall of excavation; Post excavation
A8-4A-EX:1.0-E	4/7/2021	1.0	**370**	0.57	Performance soil sample, E sidewall of excavation; Further excavated
A8-4A-EX:1.0-E,2	4/9/2021	1.0	42	--	Confirmation soil sample, E sidewall of excavation; Post excavation
A8-4A-EX:2.0-W	4/7/2021	2.0	**1,000**	1.70	Performance soil sample, W sidewall of excavation; Further excavated
A8-4A-EX:2.0-W,2	4/12/2021	2.0	ND <6.1	ND <0.61	Confirmation soil sample, W sidewall of excavation; Post excavation
A8-4A-EX:3.0-N	4/7/2021	3.0	250	0.75	Performance soil sample, N sidewall of excavation; Further excavated
A8-4A-EX:3.0-N,2	4/9/2021	3.0	19	--	Confirmation soil sample, N sidewall of excavation; Post excavation
9A	12/1/2015	0.5	5,140	**10.8**	Soil sampling by others (December 2015), prior to removals
A8-9A:0.5	2/26/2021	0.5	90	ND <0.57	Initial soil sampling, no additional removals necessary
A8-9A:1.0	2/26/2021	1.0	120	ND <0.59	Initial soil sampling, no additional removals necessary
2A	10/30/2015	0.5	172	ND <1.0	Soil sampling by others (December 2015), prior to removals
A8-2A:0.5	2/26/2021	0.5	120	--	Initial soil sampling, no additional removals necessary

Notes on Page 2

Table 3
Select Laboratory Analytical Results
for Soil Samples During Subsequent Remediation
Independent Remedial Action Report
16008 60th Street East
Sumner, Washington
GEI Project #37018
(Continued)

Sample Number	Sample Date	Depth (feet below ground surface)	Metals (mg/kg)		Notes
			Total Lead	Cadmium	
12A	12/1/2015	0.8	228	ND <1.0	Soil sampling by others (December 2015), prior to removals
A6-12A:0.8	2/26/2021	0.8	22	--	Initial soil sampling, no additional removals necessary
A6-12.5A:0.8	2/26/2021	0.8	**360**	--	Initial soil sampling (February 2021), prior to removals
A6-12.5A-EX:1.5	4/7/2021	1.5	19	--	Confirmation soil sample, N bottom of excavation; Post excavation
A6-12.5A-EX:2.0	4/7/2021	2.0	ND <6.1	--	Confirmation soil sample, S bottom of excavation; Post excavation
A6-12.5A-EX:1.25-W	4/7/2021	1.25	210	--	Confirmation soil sample, W sidewall of excavation; Post excavation
A6-12.5A-EX:1.25-S	4/7/2021	1.25	64	--	Confirmation soil sample, S sidewall of excavation; Post excavation
A6-12.5A-EX:1.25-E	4/7/2021	1.25	11	--	Confirmation soil sample, E sidewall of excavation; Post excavation
13A	12/1/2015	0.8	290	ND <1.0	Soil sampling by others (December 2015), prior to removals
A6-13A:0.8	2/26/2021	0.8	180	--	Initial soil sampling, no additional removals necessary
A6-13A:1.5	2/26/2021	1.5	ND <6.4	--	Initial soil sampling, no additional removals necessary
MTCA Method A Action Level			**250**	**2.0**	

Notes:

mg/kg	Milligrams per kilogram
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
PID	Photoionization detector
*	MTCA Method A Cleanup Level is 30 mg/kg with benzene present and 100 mg/kg without benzene present
400	Bold value indicates exceedance of respective MTCA Method A Cleanup Level
--	Not analyzed
3A	Sample number assigned by others during a 2015 investigation
A8-3A:0.5	Sample number assigned by GEI during a February 2021 initial investigation
A8-3A-EX:1.5-N	Performance soil sample representing soils that were subsequently removed during the April 2021 remediation
A8-3A-EX:1.5-N,3	Confirmation soil sample representing final limits of excavation during the April 2021 remediation

ATTACHMENT 3

PHOTOS

Project No. 37018	**Description**	Photo of initiation of remedial excavation, facing N	**Photo 1**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** October 5, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of initiation of remedial excavation, facing NE	**Photo 2**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** October 5, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of initiation of remedial excavation, facing SW	**Photo 3**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** October 5, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of initiation of remedial excavation, facing SE	**Photo 4**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** October 5, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of sample preparation of remedial excavation, facing S	**Photo 5**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** October 5, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued remedial excavation, facing S	**Photo 6**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** December 6, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued remedial excavation, facing W	**Photo 7**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** December 6, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued remedial excavation, facing S	**Photo 8**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** December 18, 2017
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued remedial excavation, facing W	**Photo 9**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** January 17, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued remedial excavation, facing S	**Photo 10**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** January 17, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of post-remedial excavation backfilling, facing SE	**Photo 11**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** January 31, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of post-remedial excavation backfilling, facing W	**Photo 12**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** January 31, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the site, facing E/SE	**Photo 13**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the eastern portion site, facing N	**Photo 14**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the existing groundwater well MW-1	**Photo 15**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-2	**Photo 16**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-2	**Photo 17**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-3	**Photo 18**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-3	**Photo 19**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-4	**Photo 20**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the Area 6 prior to supplemental remediation, facing NW	**Photo 21**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 7, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the Area 8 prior to supplemental remediation, facing SW	**Photo 22**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 7, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of final limits of Area 6 supplemental remediation, facing NW	**Photo 23**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 8, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of initial limits of Area 8 supplemental remediation, facing N	**Photo 24**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 9, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued excavation of Area 8, Part 4, facing SW	**Photo 25**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 12, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued excavation of Area 8, Part 4, facing NW	**Photo 26**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 15, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of continued excavation of Area 8, Part 3, facing NW	**Photo 27**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 15, 2021
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of final limits of Area 8 supplemental remediation, facing S	**Photo 28**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** April 15, 2021
	Client	Sunset Chevrolet/Mitchell Development	

APPENDIX A

BACKGROUND DOCUMENTS

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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

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

SNAP

METAL — SAMPLE IDENTIFICATION

SOIL	SUMAP02	SUMAP03
METALS - ICP(mg/kg-dr)		
As	363	57
Ba	8700	174
Cd	186	12.5
Cr	2340	902
Pb	323	4040
Ag	84.6	5.06
Se	60J	5.0U
Hg	.034J	0.028
METALS - EP-Tox (µg/l)		
As	522	30U
Ba	1170	337
Cd	51.4	30.7
Cr	134	8.3J
Pb	20U	957
Ag	2.0U	2.0U
Se	50U	50U
Hg		.04U

VOA — SAMPLE IDENTIFICATION

SOIL (µg/kg)	SUMAP01	SUMAP01RE	SUMAP04	SUMAP01A
Methylene Chloride	3.0 UJ	3.2UJ		
Tetrachloroethene	4.0J	2.2J		
Toluene	13J	13J		
Acetone	37	60		
Ethylbenzene	5.2J	2.3J		
Total Xylenes	25	11J		
2-Butanone	3.5J	6.7J		
Benzene	2.6J	1.7J		
4-Methyl-2-Pentanone	4.5J	8.3M		

VOA — SAMPLE IDENTIFICATION

WATER (µg/l)	SUMAP01	SUMAP01RE	SUMAP04	SUMAP01A
Methylene Chloride			5.0UJ	3.0UJ
2-Butanone			49	17
Total Xylenes			4.9M	
Acetone				33
Carbon Disulfide				0.5M
Toluene				1.6J
4-Methyl-2-Pentanone				4.8J

SEMIVOLATILES — SAMPLE IDENTIFICATION

SOIL (µg/kg)	SUMAP01	SUMAP01RE	SUMAP04	SUMAP01A
5,5-Dimethyl-(Z)-2-Hexene	120J	69J		

Washington State Department of Ecology
Sample/Project Analysis Results

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077474 Description: SUMNAP01

Source: Soil (Spill/Contaminated Area)

Begin Date: 91/02/07

Gen Inorg/Phys-Speci	Sediment Result	Units
pH Sedmt Meter	NAI	Std Unts

Organics - General	Sediment Result	Units
HYDROCBN ,PET MUD	65360 *	MG/KG

Analytical Resources, Inc Contract Lab Program	Sediment Result	Units
VOA GC/MS	ANALYZED	CLP

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077475 Description: SUMNAP02

Source: Soil (Spill/Contaminated Area)

Begin Date: 91/02/07

Metals - Specified		Sediment Result	Units
Mercury	Hg-Sedmt	0.034J*	mg/kg-wt

Metals - Specified Matrix Spike #1		Sediment Result	Units
Mercury	Hg-Sedmt	80	% Recov

Metals - Specified Matrix Spike #2		Sediment Result	Units
Mercury	Hg-Sedmt	77	% Recov

Metals - EP Toxicity		EPT-Sld Result	Units
Mercury	Hg-Total	NAR	ug/l

Metals - ICP Scan		Sediment Result	Units
Arsenic	As-Sedmt	363 *	mg/kg-dr
Barium	Ba-Sedmt	8700 *	mg/kg-dr
Cadmium	Cd-Sedmt	186 *	mg/kg-dr
Chromium	Cr-Sedmt	2340 *	mg/kg-dr
Lead	Pb-Sedmt	323 *	mg/kg-dr
Silver	Ag-Sedmt	84.6 *	mg/kg-dr
Selenium	Se-Sedmt	60J*	mg/kg-dr

Metals - EP-Tox, ICP		EPT-Sld Result	Units
Arsenic	As-Total	522 *	ug/l
Barium	Ba-Total	1170 *	ug/l
Cadmium	Cd-Total	51.4 *	ug/l
Chromium	Cr-Total	134 *	ug/l
Lead	Pb-Total	20U	ug/l
Silver	Ag-Total	2.0U	ug/l
Selenium	Se-Total	50U	ug/l
EPTOX	Solids	REQ	Percent

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS Officer: RXP Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077476 Description: SUMNAP03 Source: Soil (Spill/Contaminated Area)

Begin Date: 91/02/07

Metals - Specified		Sediment Result	Units
Mercury	Hg-Sedmt	0.028 *	mg/kg-wt

Metals - EP Toxicity		EPT-Sld Result	Units
Mercury	Hg-Total	0.04U	ug/l

Metals - ICP Scan		Sediment Result	Units
Arsenic	As-Sedmt	57.0 *	mg/kg-dr
Barium	Ba-Sedmt	174 *	mg/kg-dr
Cadmium	Cd-Sedmt	12.5 *	mg/kg-dr
Chromium	Cr-Sedmt	902 *	mg/kg-dr
Lead	Pb-Sedmt	4040 *	mg/kg-dr
Silver	Ag-Sedmt	5.06 *	mg/kg-dr
Selenium	Se-Sedmt	5.0U	mg/kg-dr

Metals - EP-Tox, ICP		EPT-Sld Result	Units
Arsenic	As-Total	30U	ug/l
Barium	Ba-Total	337 *	ug/l
Cadmium	Cd-Total	30.7 *	ug/l
Chromium	Cr-Total	8.3J*	ug/l
Lead	Pb-Total	957 *	ug/l
Silver	Ag-Total	2.0U	ug/l
Selenium	Se-Total	50U	ug/l
EPTOX	Solids	REQ	Percent

Metals - EP-Tox, ICP Matrix Spike #1		EPT-Sld Result	Units
Arsenic	As-Total	97	% Recov
Barium	Ba-Total	99	% Recov
Cadmium	Cd-Total	102	% Recov
Chromium	Cr-Total	96	% Recov
Lead	Pb-Total	101	% Recov
Silver	Ag-Total	79	% Recov
Selenium	Se-Total	97	% Recov

Metals - EP-Tox, ICP Matrix Spike #2		EPT-Sld Result	Units
Arsenic	As-Total	96	% Recov
Barium	Ba-Total	98	% Recov
Cadmium	Cd-Total	101	% Recov
Chromium	Cr-Total	96	% Recov
Lead	Pb-Total	99	% Recov
Silver	Ag-Total	83	% Recov
Selenium	Se-Total	96	% Recov

Organics - General		Sediment Result	Units
HYDROCBN	,PET MUD	5420 *	MG/KG

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS Officer: RXP Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077477 Description: SUMNAP04 Source: Soil (Spill/Contaminated Area)

Begin Date: 91/02/07

Organics - General	Sediment Result	Units
HYDROCBN ,PET MUD	19290 *	MG/KG

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP

Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077478

Description: SUMNAP04

Source: Effluent Wastewater (General)

Begin Date: 91/02/07

Analytical Resources, Inc Contract Lab Program		Water-Total Result	Units
VOA	GC/MS	ANALYZED	CLP

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP Account: J1A05

Laboratory: Ecology, Manchester

Sample No: 91 077479 Description: SUMNAP01A

Source: Industrial Surface Runoff/Pond

Begin Date: 91/02/07 1

Analytical Resources, Inc Contract Lab Program		Water-Total Result	Units
VOA	GC/MS	ANALYZED	CLP

?

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP

Account: J1A05

Blank ID: BS1044

Organics - General Blank #1	Sediment Result	Units
HYDROCBN ,PET MUD	ND(100U)	MG/KG

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS Officer: RXP Account: J1A05

Blank ID: BS1044D

Organics - General Blank #2	Sediment Result	Units
HYDROCBN ,PET MUD	ND(100U)	MG/KG

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS Officer: RXP Account: J1A05

Blank ID: BS1050

Organics - General Blank #1	Sediment Result	Units
HYDROCBN ,PET MUD	ND(100U)	MG/KG

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS

Officer: RXP

Account: J1A05

Blank ID: PB 12.30

Metals - ICP Scan Blank #1		Sediment Result	Units
Arsenic	As-Sedmt	3.0U	mg/kg-dr
Barium	Ba-Sedmt	0.1U	mg/kg-dr
Cadmium	Cd-Sedmt	0.29J*	mg/kg-dr
Chromium	Cr-Sedmt	0.5U	mg/kg-dr
Lead	Pb-Sedmt	2.0U	mg/kg-dr
Silver	Ag-Sedmt	0.2U	mg/kg-dr
Selenium	Se-Sedmt	5.0U	mg/kg-dr

(Sample Complete)

Project: DOE-231Z SUMNER NATIONAL AUTO PARTS Officer: RXP Account: J1A05

Blank ID: PB 17.14

Metals - EP-Tox, ICP Blank #1		EPT-Sld Result	Units
Arsenic	As-Total	30U	ug/l
Barium	Ba-Total	1.0U	ug/l
Cadmium	Cd-Total	2.0U	ug/l
Chromium	Cr-Total	5.0U	ug/l
Lead	Pb-Total	20U	ug/l
Silver	Ag-Total	2.0U	ug/l
Selenium	Se-Total	50U	ug/l

(Sample Complete)

State of Washington Department of Ecology
Manchester Environmental Laboratory
7411 Beach Dr. East Port Orchard WA. 98366

Data Review
March 24, 1991

Project: Sumner National Auto Parts

Samples: 077474 077478 077479

Laboratory: Analytical Resources Inc. 7766

By: Stuart Magoon

Case Summary

There is no need to assimilate the "dilution factor" or "sample wt/vol" into the final values reported; these calculations have already been figured into the reported values.

All samples were received at the Manchester Laboratory in good condition on Feburary 12, 1991.
The samples were transported to Analytical Resources Inc. for VOA, and arrived in good condition on February 14, 1991.

These analyses were reviewed for qualitative and quantitative accuracy, validity, and usefulness.

All four samples were analyzed by EPA method 8240.

Field ID	DOE Lab ID	ARI ID
SUMNAP01	077474	7766A
SUMNAP04	077478	7766B
SUMNAP01A	077479	7766C

Volatiles

Sample	Date Collect	Date Extd	Date Anlz	#Days Collect to anal
077474	2/7	NA	2/14	7 of 14
077474RE	2/7	NA	2/14	7 of 14
077478	2/7	NA	2/14	7 of 14
077479	2/7	NA	2/14	7 of 14

NA = Not applicable

These samples were analyzed within the SW-846 recommended holding time.
The "RE" suffix is an abbreviation for re-analysis.

Surrogates:

Surrogate recoveries for these samples, the matrix spikes, and the associated method blanks are reasonable, acceptable and within the QC limits, with one exception. The Toluene-d8 recovery for the re-analysis of sample 077474 was recovered slightly above the upper QC limit. This outlier is not serious and does not signal the need for data qualifiers; however, other QC indcators demostrate that results from the original analysis are more reliable.

Matrix Spike and Matrix Spike Duplicate (MS/MSD):

MS/MSD recoveries and precision (RPD) data are acceptable and within QC limits.

Sample Data:

This data is acceptable for use. Note that data qualifiers may modify the usefulness of the individual values.

4 March 1991

ANALYTICAL RESOURCES INCORPORATED

Analytical Chemists & Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

Stuart Magoon
Washington State Dept. of Ecology
P.O. Box 307
Manchester, WA 98353

RE: Project 'SNAP' - ARI Job #07766

Dear Stuart,

Please find enclosed the reports for the above referenced samples received 02/14/91 for analysis of volatiles and pH. No request for pH was listed on the C-O-C but pH was listed on the sample analysis tag. Charles McDonald contacted you to affirm that pH was a required part of the analyses.

The pH was performed in duplicate with the following results:

Sample 077478 pH = 10.97 Duplicate pH = 10.97

Analysis of sample **077474 (ARI 7766A)** gave internal standard areas below requirements for d5-Chlorobenzene. Reanalysis of the sample at the same concentration gave an analysis that had two internal standards below response limits and a surrogate outside required limits, indicating a matrix effect.

Sample **077478 (7766Bre)** was run at a 1 to 5 dilution due to matrix interference with the analysis (foaming and plugging of transfer lines). Quantiation of unknowns in the retention window of d5-Chlorobenzene were quantitated using the area of 1,4-Difluorobenzene due to coeluting interferences with the Chlorobenzene.

Sample **077479 (ARI 7766C)** consisted of a aqueous phase and an oily phase (approximately 1% of the total volume) that clung to the sides of the vial. After conversation with you on 02/15/91, Charles attempted to analyze the aqueous and oil phase separately. The oil phase was difficult to collect, and was relatively insoluble in methanol, therefore a separate analysis was not possible.

It is thought that part of the oil phase was analyzed in the 5 ml analysis of sample **077479 (ARI 7766CRE2)**, from inspection of the chromatogram and the results for this analysis.

Only a water matrix spike/spike duplicate were run per instructions on the RCLS.

If you have questions, please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Rosa Dunnihoo
Project Manager

Enclosures

cc: File 07766

ANALYTICAL RESOURCES INCORPORATED

Analytical Chemists & Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

WATER VOLATILE SURROGATE RECOVERY

ARI Job No: 7766

Client: WDOE
Project: SNAP

Client Sample ID	S1 (TOL)	S2 (BFB)	S3 (DCE)	Other	TOT OUT
Method Blank 2/14	106	103	99.6		0
Method Blank 2/15	103	95.5	98.5		0
077478	105	103	103		0
077479	103	99.7	104		0
077479MS	104	95.8	99.0		0
077479MSD	104	96.1	96.2		0

	QC LIMITS
S1 (TOL)=Toluene-d8	(88-110)
S2 (BFB=Bromofluorobenzene	(86-115)
S3 (DCE)=1,2-Dichloroethane-d4	(76-114)

Asterisked values outside QC Limits

FORM II VOA-1

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SOIL VOLATILE SURROGATE RECOVERY

ARI Job No: 7766
Level: Low

Client: WDOE
Project: SNAP

Client Sample ID	S1 (TOL)	S2 (BFB)	S3 (DCE)	Other	TOT OUT
Method Blank 2/15	100	99.1	101		0
077474	113	92.6	94.9		0
077474RE	118 *	104	104		1

	QC LIMITS
S1 (TOL)=Toluene-d8	(81-117)
S2 (BFB=Bromofluorobenzene	(74-121)
S3 (DCE)=1,2-Dichloroethane-d4	(70-121)

Asterisked values outside QC Limits

FORM II VOA-2

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(206) 621-7523 (FAX)

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ARI Job No: 7766

Client: WDOE
Project: SNAP

Sample No: #077479

COMPOUND	SPIKE ADDED (µg/L)	SAMPLE CONC (µg/L)	MS CONC (µg/L)	MS % REC	QC LIMITS REC
1,1-Dichloroethene	50.0	0.0	45.4	90.7	61-145
Trichloroethene	50.0	0.0	44.1	88.1	71-120
Benzene	50.0	0.0	44.3	88.5	76-127
Toluene	50.0	1.6	46.8	90.5	76-125
Chlorobenzene	50.0	0.0	43.6	87.2	75-130

COMPOUND	SPIKE ADDED (µg/L)	MSD CONC (µg/L)	MSD % REC	% RPD	Q C LIMITS	
					RPD	REC
1,1-Dichloroethene	50.0	45.3	90.7	0.1	14	61-145
Trichloroethene	50.0	45.1	90.2	-2.3	14	71-120
Benzene	50.0	44.9	89.7	-1.3	11	76-127
Toluene	50.0	48.1	93.2	-3.0	13	76-125
Chlorobenzene	50.0	45.7	91.4	-4.7	13	75-130

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Asterisked values outside QC Limits

Comments:

FORM III VOA-1

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VOLATILE METHOD BLANK SUMMARY

ARI Job No: 7766
Lab Sample ID: 0214MB
Date Analyzed: 02/14/91
Matrix: Waters
Instrument ID: FINN III

Client: WDOE
Project: SNAP

Time Analyzed: 11:32
Level: Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS,MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
077478	7766BRE	7766BRE	18:36

Comments:

FORM IV VOA

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VOLATILE METHOD BLANK SUMMARY

ARI Job No: 7766
Lab Sample ID: 0215MB
Date Analyzed: 02/15/91
Matrix: Waters
Instrument ID: FINN III

Client: WDOE
Project: SNAP

Time Analyzed: 10:53
Level: Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS,MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
077479	7766CRE2	7766CRE2	18:04
077479MS	7766CRE2MS	7766CRE2MS	18:39
077479MSD	7766CRE2MSD	7766CRE2MSD	19:04

Comments:

FORM IV VOA

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VOLATILE METHOD BLANK SUMMARY

ARI Job No: 7766
Lab Sample ID: F10215MB
Date Analyzed: 02/15/91
Matrix: Soils
Instrument ID: FINN I

Client: WDOE
Project: SNAP

Time Analyzed: 09:51
Level: Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS,MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
077474	7766A	7766A	16:40
077474RE	7766ARE	7766ARE	18:17

Comments:

FORM IV VOA

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ORGANICS ANALYSIS DATA SHEET
Volatiles by Method 624/8240

Sample No: #077474

Lab ID: 7766A
Matrix: Soils/Sediments

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Dorm B. Patton
Report prepared 02/19/91 - MAC:K kas

VTSR: 02/14/91

Instrument: FINN I
Date Analyzed: 2/15/91

Amount Analyzed: 4.6 g (dry wt.)
Percent Moisture: 16.0%
pH: NA

CAS Number		µg/Kg
74-87-3	Chloromethane	2.2 U
74-83-9	Bromomethane	2.2 U
75-01-4	Vinyl Chloride	3.3 U
75-00-3	Chloroethane	3.3 U
75-09-2	**Methylene Chloride** 3.0 us	~~2.1 B~~
67-64-1	**Acetone**	**37**
75-15-0	Carbon Disulfide	2.2 U
75-35-4	1,1-Dichloroethene	1.1 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.1 U
67-66-3	Chloroform	1.1 U
107-06-2	1,2-Dichloroethane	2.2 U
78-93-3	**2-Butanone**	**3.5 J**
71-55-6	1,1,1-Trichloroethane	1.1 U
56-23-5	Carbon Tetrachloride	2.2 U
108-05-4	Vinyl Acetate	2.2 U
75-27-4	Bromodichloromethane	1.1 U
75-69-4	Trichlorofluoromethane	2.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.2 U

CAS Number		µg/Kg
78-87-5	1,2-Dichloropropane	1.1 U
10061-01-5	cis-1,3-Dichloropropene	2.2 U
79-01-6	Trichloroethene	1.1 U
124-48-1	Dibromochloromethane	1.1 U
79-00-5	1,1,2-Trichloroethane	1.1 U
71-43-2	**Benzene**	**2.6 J**
10061-02-6	Trans-1,3-Dichloropropene	1.1 U
110-75-8	2-Chloroethylvinylether	2.2 U
75-25-2	Bromoform	3.3 U
108-10-1	**4-Methyl-2-Pentanone**	**4.5 J**
591-78-6	2-Hexanone	2.2 U
127-18-4	**Tetrachloroethene**	**4.0 J**
79-34-5	1,1,2,2-Tetrachloroethane	2.2 U
108-88-3	**Toluene**	**13 J**
108-90-7	Chlorobenzene	1.1 U
100-41-4	**Ethylbenzene**	**5.2 J**
100-42-5	Styrene	1.1 U
1330-20-7	**Total Xylenes**	**25**
Total Dichlorobenzenes		5.5 U

Surrogate Recoveries

d8-Toluene	113%
Bromofluorobenzene	92.6%
d4-1,2-Dichloroethane	94.9%

Data Reporting Qualifiers

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected at the given detection limit.

J Indicates an estimated value. ~~when result is less than specified detection limit.~~

NR Analysis not required.

B This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: #077474

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 7766A
Matrix: Soils/Sediments

Data Release Authorized: Donna B. Patton

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	39761-61-0	5,5-Dimethyl-(Z)-2-Hexene	VOA	647	120 J
2	-	C9.H16 Isomer	VOA	759	44 J
3	-	UNKNOWN (BP M/E 55)	VOA	799	44 J
4	-	UNKNOWN (BP M/E 69)	VOA	925	61 J
5	-	UNKNOWN (BP M/E 95)	VOA	940	110 J
6	-	UNKNOWN (BP M/E 95)	VOA	971	34 J
7	-	UNKNOWN (BP M/E 105)	VOA	1013	78 J
8	-	UNKNOWN (BP M/E 67)	VOA	1037	64 J
9	-	UNKNOWN (BP M/E 41)	VOA	1061	16 J
10	-	UNKNOWN (BP M/E 81)	VOA	1083	15 J
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Form 1, Part B

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ORGANICS ANALYSIS DATA SHEET
Volatiles by Method 624/8240

Sample No: #077474 RE re-analysis

Lab ID: 7766Are
Matrix: Soils/Sediments

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Ann B. Patton
Report prepared 02/19/91 - MAC:K kas

VTSR: 02/14/91

Amount Analyzed: 4.7 g (dry wt.)
Percent Moisture: 16.0%
pH: NA

Instrument: FINN I
Date Analyzed: 2/15/91

CAS Number		µg/Kg
74-87-3	Chloromethane	2.1 U
74-83-9	Bromomethane	2.1 U
75-01-4	Vinyl Chloride	3.2 U
75-00-3	Chloroethane	3.2 U
75-09-2	**Methylene Chloride** 3.2 U	~~1.9 B~~
67-64-1	**Acetone**	**60**
75-15-0	Carbon Disulfide	2.1 U
75-35-4	1,1-Dichloroethene	1.1 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.1 U
67-66-3	Chloroform	1.1 U
107-06-2	1,2-Dichloroethane	2.1 U
78-93-3	**2-Butanone**	**6.7 J**
71-55-6	1,1,1-Trichloroethane	1.1 U
56-23-5	Carbon Tetrachloride	2.1 U
108-05-4	Vinyl Acetate	2.1 U
75-27-4	Bromodichloromethane	1.1 U
75-69-4	Trichlorofluoromethane	2.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.1 U

CAS Number		µg/Kg
78-87-5	1,2-Dichloropropane	1.1 U
10061-01-5	cis-1,3-Dichloropropene	2.1 U
79-01-6	Trichloroethene	1.1 U
124-48-1	Dibromochloromethane	1.1 U
79-00-5	1,1,2-Trichloroethane	1.1 U
71-43-2	**Benzene**	**1.7 J**
10061-02-6	Trans-1,3-Dichloropropene	1.1 U
110-75-8	2-Chloroethylvinylether	2.1 U
75-25-2	Bromoform	3.2 U
108-10-1	**4-Methyl-2-Pentanone**	**8.3 M**
591-78-6	2-Hexanone	2.1 U
127-18-4	**Tetrachloroethene**	**2.2 J**
79-34-5	1,1,2,2-Tetrachloroethane	2.1 U
108-88-3	**Toluene**	**13 J**
108-90-7	Chlorobenzene	1.1 U
100-41-4	**Ethylbenzene**	**2.3 J**
100-42-5	Styrene	1.1 U
1330-20-7	**Total Xylenes**	**11 J**
Total Dichlorobenzenes		5.3 U

Surrogate Recoveries

d8-Toluene	118%
Bromofluorobenzene	104%
d4-1,2-Dichloroethane	104%

Data Reporting Qualifiers

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected at the given detection limit.

J Indicates an estimated value, ~~when result is less than specified detection limit.~~

NR Analysis not required.

B This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **#077474 re-analysis**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 7766Are
Matrix: Soils/Sediments

Data Release Authorized: Donna B. Patten

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	39761-61-0	5,5-Dimethyl-(Z)-2-Hexene	VOA	648	69 J
2	-	C9.H16 Isomer	VOA	761	65 J
3	-	C9.H18 Isomer	VOA	800	37 J
4	-	UNKNOWN (BP M/E 69)	VOA	925	67 J
5	-	UNKNOWN (BP M/E 95)	VOA	941	150 J
6	-	UNKNOWN (BP M/E 95)	VOA	971	44 J
7	-	UNKNOWN (BP M/E 55)	VOA	1014	93 J
8	-	UNKNOWN (BP M/E 67)	VOA	1037	95 J
9	-	UNKNOWN (BP M/E 81)	VOA	1083	29 J
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Form 1, Part B

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ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240 Sample: #077478

Lab ID: 7766Bre
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Ann B. Patter
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Amount Analyzed: 1 mls *
Conc/Dil: 1 to 5
pH: NA

Instrument: FINN III
Date Analyzed: 2/14/91

CAS Number		µg/L
74-87-3	Chloromethane	15 U
74-83-9	Bromomethane	15 U
75-01-4	Vinyl Chloride	15 U
75-00-3	Chloroethane	15 U
75-09-2	**Methylene Chloride** 5.0 uJ	~~4.2 MB~~
67-64-1	**Acetone**	**120**
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
156-60-5	Trans-1,2-Dichloroethene	5.0 U
156-59-2	Cis-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	**2-Butanone**	**49**
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	5.0 U
75-69-4	Trichlorofluoromethane	10 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	5.0 U
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	5.0 U
108-10-1	4-Methyl-2-Pentanone	25 U
591-78-6	2-Hexanone	25 U
127-18-4	Tetrachloroethene	5.0 U
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
1330-20-7	**Total Xylenes**	**4.9 M**
1,1,2-Trichloro-1,2,2-trifluoroethane		5.0 U

Surrogate Recoveries

d8-Toluene	105%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	103%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value. ~~when result is less than specified detection limit.~~

* — Matrix interference due to sample foaming precludes a more concentrated analysis.

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **#077478**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 7766Bre
Matrix: Water

Data Release Authorized: Donna B. Patton

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1336	530 J
2	-	UNKNOWN (BP M/E 57)	VOA	1378	230 J
3	-	Trimethylbenzene Isomer	VOA	1444	260 J
4	-	UNKNOWN (BP M/E 55)	VOA	1462	590 J
5	-	UNKNOWN Hydrocarbon (BP M/E 43)	VOA	1536	340 J
6	-	UNKNOWN (BP M/E 41)	VOA	1562	610 J
7	-	UNKNOWN (BP M/E 55)	VOA	1584	230 J
8	-	UNKNOWN (BP M/E 41)	VOA	1629	250 J
9	-	UNKNOWN (BP M/E 55)	VOA	1647	670 J
10	-	UNKNOWN Hydrocarbon (BP M/E 43)	VOA	1687	240 J
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Form 1, Part B

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ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240 Sample: #077479

Lab ID: 7766Cre2
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Dan B. Patton
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Instrument: FINN III
Date Analyzed: 2/15/91

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1
pH: NA

CAS Number		µg/L
74-87-3	Chloromethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	**Methylene Chloride** 30 ug	~~0.7 JB~~
67-64-1	**Acetone**	**33**
75-15-0	**Carbon Disulfide**	**0.5 M**
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	**2-Butanone**	**17**
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	**4-Methyl-2-Pentanone**	**4.8 J**
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	**Toluene**	**1.6 J**
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.0 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	99.7%
d4-1,2-Dichloroethane	104%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value ~~when result is less than specified detection limit.~~

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **#077479**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 7766Cre2
Matrix: Water

Data Release Authorized: Ann B. Patton

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	C10.H22 Isomer	VOA	1379	8 J
2	-	UNKNOWN Hydrocarbon (BP M/E 43)	VOA	1464	23 J
3	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1483	7 J
4	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1538	42 J
5	-	UNKNOWN (BP M/E 55)	VOA	1552	16 J
6	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1563	20 J
7	-	UNKNOWN Hydrocarbon (BP M/E 43)	VOA	1585	16 J
8	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1630	20 J
9	-	UNKNOWN Hydrocarbon (BP M/E 43)	VOA	1639	14 J
10	-	UNKNOWN Hydrocarbon (BP M/E 57)	VOA	1689	42 J
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
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Form 1, Part B

ANALYTICAL RESOURCES INCORPORATED

Analytical Chemists & Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240 Sample: Method Blank

Lab ID: 0214MB
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Jim B. Patton
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Instrument: FINN III
Date Analyzed: 2/14/91

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1
pH: NA

CAS Number		µg/L
74-87-3	Chloromethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	**Methylene Chloride**	**0.3 M**
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.0 U

Surrogate Recoveries

d8-Toluene	106%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	99.6%

Data Reporting Qualifiers

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected at the given detection limit.

J Indicates an estimated value when result is less than specified detection limit.

B This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **Method Blank**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 0214MB
Matrix: Water

Data Release Authorized: Dam B. Patton

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	No UNKNOWN pks >10% IS peak height	VOA	-	-
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
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Form 1, Part B

ANALYTICAL RESOURCES INCORPORATED

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333 Ninth Ave. North
Seattle, WA 98109-5187
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ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240 Sample: Method Blank

Lab ID: 0215MB
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Dom B. Pitton
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1
pH: NA

Instrument: FINN III
Date Analyzed: 2/15/91

CAS Number		µg/L
74-87-3	Chloromethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	**Methylene Chloride**	**0.8 M**
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.0 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	95.5%
d4-1,2-Dichloroethane	98.5%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value when result is less than specified detection limit.

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **Method Blank**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 0215MB
Matrix: Water

Data Release Authorized: Dan B. Patton

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	No UNKNOWN pks >10% IS peak height	VOA	-	-
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
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Form 1, Part B

ANALYTICAL RESOURCES INCORPORATED

Analytical Chemists & Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET
Volatiles by Method 624/8240

Sample No: Method Blank

Lab ID: 0215MB
Matrix: Soils/Sediments

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized:
Report prepared 02/19/91 - MAC:K kas

VTSR: 02/14/91

Instrument: FINN I
Date Analyzed: 2/15/91

Amount Analyzed: 5.0 g (equiv. dry wt.)
Percent Moisture: NA
pH: NA

CAS Number		µg/Kg
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	Methylene Chloride	0.5 M
67-64-1	Acetone	3.0 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
540-59-0	1,2-Dichloroethene (total)	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	2.0 U
78-93-3	2-Butanone	7.5 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	2.0 U
108-05-4	Vinyl Acetate	2.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/Kg
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	2.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	2.0 U
75-25-2	Bromoform	3.0 U
108-10-1	4-Methyl-2-Pentanone	2.0 U
591-78-6	2-Hexanone	2.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	2.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
Total Dichlorobenzenes		5.0 U

Surrogate Recoveries

d8-Toluene	100%
Bromofluorobenzene	99.1%
d4-1,2-Dichloroethane	101%

Data Reporting Qualifiers

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected at the given detection limit.

J Indicates an estimated value when result is less than specified detection limit.

NR Analysis not required.

B This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

ANALYTICAL RESOURCES INCORPORATED

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(206) 621-6490
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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: **Method Blank**

QC Report No: 7766-WDOE
Project No: SNAP
VTSR: 2/14/91

Lab ID: 0215MB
Matrix: Soils/Sediments

Data Release Authorized: Dwm B. Patten

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/Kg)
1	-	No UNKNOWN pks >10% IS peak height	VOA	-	-
2					
3					
4					
5					
6					
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10					
11					
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Analytical Chemists & Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240

Sample: #077479 Matrix Spike Dup.

Lab ID: 7766Cre2MSD
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Ann B. Cutter
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1
pH: NA

Instrument: FINN III
Date Analyzed: 2/15/91

CAS Number		µg/L
74-87-3	Chloromethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	**Methylene Chloride**	**0.7 JB**
67-64-1	**Acetone**	**31**
75-15-0	**Carbon Disulfide**	**0.5 J**
75-35-4	1,1-Dichloroethene	-
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	**2-Butanone**	**15**
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	-
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	-
10061-01-5	cis-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	**4-Methyl-2-Pentanone**	**5.8**
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	-
108-90-7	Chlorobenzene	-
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.0 U

Surrogate Recoveries

d8-Toluene	104%
Bromofluorobenzene	96.1%
d4-1,2-Dichloroethane	96.2%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value when result is less than specified detection limit.

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET - METHOD 624/524/8240 **Sample: #077479 Matrix Spike**

Lab ID: 7766Cre2MS
Matrix: Waters

QC Report No: 7766-WDOE
Project No: SNAP

Data Release Authorized: Pam B. Patten
Report prepared 2/19/91 - MAC:K kas

Date Received: 02/14/91

Instrument: FINN III
Date Analyzed: 2/15/91

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1
pH: NA

CAS Number		µg/L
74-87-3	Chloromethane	3.0 U
74-83-9	Bromomethane	3.0 U
75-01-4	Vinyl Chloride	3.0 U
75-00-3	Chloroethane	3.0 U
75-09-2	**Methylene Chloride**	**0.7 JB**
67-64-1	**Acetone**	**32**
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	-
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	**2-Butanone**	**18**
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.0 U
10061-02-6	Trans-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	-
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	-
10061-01-5	cis-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	**4-Methyl-2-Pentanone**	**5.9**
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	-
108-90-7	Chlorobenzene	-
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.0 U

Surrogate Recoveries

d8-Toluene	104%
Bromofluorobenzene	95.8%
d4-1,2-Dichloroethane	99.0%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value when result is less than specified detection limit.

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

A Memo From

Bob Suss

2-21-03

Jack

I have decided to place this whole matter in a holding pattern for 2 or 3 years or until Dept of Ecology forces the issue. I assume this check closes my financial account with you until further notice sometime in 2005 or 2006

Bob S

Invoice

DATE	INVOICE NO.
2/12/2003	519

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

BILL TO

Sumner National Auto Parts
Robert A. Suss
16008 60th Street East
Sumner WA 98390

P.O. NUMBER	TERMS	DUE DATE	JOB #	ENCO #
	Due on receipt	2/12/2003	JMK	E2JK-SumnerNatl-1

SERVICED	DESCRIPTION	QTY	RATE	ITEM	AMOUNT
1/9/2003	Project Administration - Technician I (Fax draft letter to Mr. Suss)	0.25	49.00	ADM153CJ-R...	12.25
1/13/2003	Report Preparation - Manager (Telephone call/update WADOE letter and report)	3.5	79.00	REP101JK-REG	276.50
1/13/2003	Travel Time - Manager (To/from site deliver report)	0.5	79.00	TRA101JK-REG	39.50
1/13/2003	Meetings - Manager (Discuss report and letter)	0.5	79.00	MEE101JK-REG	39.50
1/13/2003	Vehicle Mileage - Manager	18	0.52	VEH101JK-52	9.36
1/16/2003	Report Preparation - Manager (Telephone call/update WADOE letter)	1.5	79.00	REP101JK-REG	118.50
1/23/2003	Project Management - Manager (QC final report)	0.25	79.00	PRO101JK-REG	19.75
1/23/2003	Copying (#43498 - printing of reports)	101.27	1.15	PRI101-COP	116.46
1/23/2003	Auto Cad Services (#422 - revision to Figures)	94.68	1.15	CON104-AUT	108.88
1/23/2003	Project Administration - Technician I (Preparation of reports to be mailed)	0.25	49.00	ADM153CJ-R...	12.25
1/23/2003	Shipping & Handling (Postage to mail reports)	3.95	1.15	SHI101-SHI	4.54
1/23/2003	Vehicle Mileage - Manager (Post office)	5	0.52	VEH101JK-52	2.60
2/3/2003	Project Management - Manager (Telephone call from WADOE - Marcel)	0.25	79.00	PRO101JK-REG	19.75

Thank you for your business.

Total $779.84

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

February 6, 2003

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

Dear Mr. Suss:

RE: Sumner National Auto Parts, 16008 60th Street East, Sumner, WA 98390

This opinion letter is in reference to my telephone conversation with Mr. Jonathan Kemp of EnCo Environmental Corporation on February 3, 2003. During this telephone conversation we discussed the Limited Phase II Site Assessment, dated January 17, 2003 and the letter dated January 17, 2003, which Mr. Kemp wrote to Chuck Cline. In this letter Mr. Kemp requested that State of Washington Department of Ecology (Ecology) write an opinion letter specifying Ecology's requirements for a possible NFA issuance, and potential removal of Sumner National Auto Parts from the Ecology Hazardous Sites List.

The No-Further-Action (NFA) determination could be granted for those contaminated sites where the compliance with Model Toxic Control Act (MTCA) cleanup standards was demonstrated. This means that the identified contaminants concentration levels must be at or below the cleanup level. Ecology recognizes that a separate determination could be made for soils and ground water. The procedures are covered by pertinent regulations that include Chapter 70.105D RCW and Chapter 173-340 WAC.

As indicated in the Assessment the current levels of lead found in the soils are exceeding MCTA Method A cleanup level of 250 mg/kg. Ecology assumes that this concentration of lead would be protective of human health risk for direct contact. The soil should be remediated to reflect that cleanup level. At this point it would also be assumed that the lead in the soil is a potential source of ground water contamination.

It is not clear whether any ground water tests have been performed at the site or its vicinity. With ground water levels of 5 to 7 feet below ground surface it seems that sampling of the ground water is a necessary component of site characterization effort. The Method A cleanup level for lead for the ground water is 15 ug/l. The MTCA compliance means remediation to below this contaminant level.

Once the indicated contamination has been adequately addressed and NFA granted, Ecology would proceed with removal of the site's name from Ecology's Hazardous Sites List. This process requires a 30 day public comment period, and Ecology or Potential Liable Person

(PLP) must adequately address any public concerns regarding the delisting. Additionally, Ecology would not lower the ranking of the site, just because a partial cleanup was conducted. The site would stay listed as initially ranked until it is shown to be in compliance with MTCA and is ready for removal from the list.

In your case a good mechanism to achieve cleanup and removal from the List is enrollment in Ecology's Voluntary Cleanup Program (VCP). The following is an internet link to information and application for a VCP:
http://www.ecy.wa.gov/programs/tcp/vcp/Vcpmain.htm
Before you apply, Ecology provides a free consultation to discuss your various options. We can meet with you and Mr. Kemp to discuss your site and the steps necessary to achieve an NFA letter.

The opinions presented by Ecology in this letter are made with respect to the information provided in the documents referred to in this letter. This opinion is only applicable to the specified site (or portion of the site) and may not be used to justify action at any other site (or portion of the site) nor any other properties owned or operated by Sumner National Auto Parts.

The State, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have any questions about any of the information presented in this letter, please contact me at (360) 407-6363.

Sincerely,

Marcel Szyszkowski, PE
Toxics Cleanup Program
Southwest Regional Office

MS/ksc:Opinion Sumner National AutoParts2.3

cc: Mr. Jonathan Kemp – EnCo
Mr. Charles Cline - Ecology

EnCo
Environmental
Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

October 23, 2002

Mr. Robert Suss, Owner
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

RE: Limited Phase II ESA – Soil Assessment Update
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Bob:

Thank you for allowing EnCo Environmental Corporation (**EnCo**) to work on your property. We very much appreciate your business and will strive to complete the work in a timely and cost-effective manner. I am confident that the work we are undertaking will meet your goal to reduce the risk level or completely remove your site from the WADOE Known or Suspected Contaminated Sites list.

On October 17, 2002, **EnCo** collected a total of eight additional soil samples, most at 2-inches below ground surface. The samples were collected at the 2-inch depth because the WADOE collected their soil samples in 1991 at or near the ground surface. The subsurface soil samples that we originally collected on October 3, 2002 will be used to document that the surface contamination identified in 1991 has not migrated below ground surface.

The cost for performing and documenting the work we did on October 16th will be approximately $2,900. **EnCo** appreciates the opportunity to be of service to you on this project. I will continue to keep you informed of our progress and costs. If you have any questions, or require additional information, please contact me.

Sincerely,

Jonathan M. Kemp
EnCo Environmental Corporation

SurfaceSamplingCostLtr1

EnCo Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373
Telephone # 253.841.9710
Fax # 253.841.0264

Change Order

NO: 2002(1)-Sumner National Auto-1

TO		DATE	PROJECT NUMBER
Mr. Robert Suss		10/08/02	E2JK-SumnerNatl-1
STREET OR P.O. BOX		PROJECT	
16008 60th Street E		Preliminary Soil Sampling	
CITY, STATE, AND ZIP CODE		PROJECT LOCATION	
Sumner WA 98390		16008 60th Street E, Sumner WA 98390	
PHONE	FAX NUMBER	DATE OF EXISTING PROPOSAL	EXISTING PROPOSAL AMOUNT
253.863.5178		9/26/02	$2,950.00

This Change Order is made by and between Consultant and Client and is hereby incorporated in the signed Environmental Services Proposal (Agreement) between the parties dated 9/26/02. This Change Order amends and supplements the Agreement to the extent the terms and conditions herein differ from those found in the Agreement. All terms and conditions in the Agreement not modified by this Change Order shall be applicable to this Change Order.

We hereby agree to make the changes specified below:

1. **Collect an additional 10 (ten) soil samples to bracket the observed subsurface soil contamination adjacent to the former concrete slab and additional time for review and interpretation for final report.**
   While on job site doing preliminary soil assessment observed contamination which required the additional sampling to properly assess the area adjacent to the slab, verbal approval was given.
   Estimated cost: $1,000.00
2. **Review and summarize the WADOE Toxic File for the job site.**
   Through site research it was learned that sampling has been done previously at this site. This information will need to be reviewed and summarized for the final report.
   Estimated cost: $1,750.00
3. **Preparation of an AutoCad diagram in place of the hand drawn sketch as proposed.**
   This is due to the complex nature of previous and current work and land features.
   Estimated cost: $650.00

TERMS AND CONDITIONS: Unless other arrangements are made our invoice would be submitted to the address presented on this proposal and would be due upon receipt. The fees will be honored for a period of no longer than 60 days. The report will be for the exclusive use of our client. Any other entities that wish to use the report shall notify **EnCo** by executing an Application for Right to Rely. Client agrees to compensate **EnCo** on a time-and-material basis for the above listed services at our 2002 rate schedule fees. The amount invoiced for this Change Order will be in addition to the original contract amount dated 9/26/02 for this project.

Work on this project will be initiated upon providing a signature in the Notice to Proceed block and return an original copy to EnCo.

NOTICE TO PROCEED

The signatory on this contract will be the person responsible for payment of our invoices. In the event that collection of balance owing is necessary the signatory on this contract would be responsible for all collection costs including personnel time, finance charges, attorney fees, and related expenses.

BY: _____
EnCo Signature

BY: _____ BY: _____
Client Signature Date Printed Name

FOR: _____ TELEPHONE #: _____
Company Name or Title

ChangeOrder1

EnCo
Environmental
Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

September 26, 2002

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

RE: **Soil Sampling East of Exterior Door**
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Suss:

EnCo Environmental Corporation (**EnCo**) appreciates the opportunity to submit this proposal to you.

1.0 PURPOSE

The purpose of performing the proposed work would be to assess surface and subsurface soils at selected locations and depths east of the exterior door of the existing building. It was reported that this area was formerly used for spray washing automobile engines and parts with a caustic solution.

2.0 SCOPE OF WORK

The scope of work would include the following subtasks:

- Collect up to three soil samples using manually operated sampling tools.
- Submit the soil samples to a certified testing laboratory under Chain-of-Custody procedures for analysis of certain petroleum hydrocarbons, volatile organic compounds, heavy metals, and pH.
- Prepare a hand sketched soil sample location diagram.
- Prepare a report of our findings.

3.0 PROCEDURES

Samples would be collected using appropriate industry standards. Sample locations would be determined by the overall visual appearance (i.e. stained areas, debris, etc.) of the ground surface, proximity to existing and former structures, reported land use practices, accessibility of the sampling equipment, and at safe distances from known subsurface utilities. Samples would be submitted to a certified testing laboratory, under Chain-of-Custody procedures. Sample locations would be depicted on a sketched diagram. Sample locations would be measured from fixed, local, and/or convenient benchmarks using a tape measure or Rolatape. We would need a copy of a recently surveyed site map in order to prepare the diagram.

4.0 SAFETY LEVEL

Safety Level D-Modified would be used on this project for **EnCo** personnel. Safety equipment would include a hard hat, a bright colored vest, rubber, PVC, or nitrile gloves, coveralls, ear protection, face shield, and steel-shanked rubber boots.

5.0 SCHEDULE

EnCo will schedule the proposed work within ten days upon receipt of our retainer and written authorization to proceed. It is anticipated that fieldwork can be completed in four hours if unrestricted access is provided and if the weather permits. A report would be submitted within approximately fifteen working days following receipt of the analytical test reports. Laboratory reports usually take ten working days to complete from the date of sample submittal.

6.0 REPORT

The report would document soil sampling procedures, observations, sample locations, tables of reported test results, laboratory reports, conclusions, recommendations, references, and terms.

7.0 FEES

Based upon the proposed scope of work, **EnCo** would perform the work for an estimated cost of **$2,950**. The work would be billed on a time and materials basis according to our enclosed 2002 rate schedule. This proposal price will be honored for a period no longer than 90 days. The fee is based on performing only the services discussed in this proposal. Our invoice would be submitted to the address presented on this proposal and would be due upon receipt. The estimated cost for the proposed scope of work is based on present knowledge of the site and objectives, which is believed sufficient to cover services herein described, but no guarantee is made or implied.

If contamination is reported at concentrations which exceed applicable Model Toxics Control Act (MTCA) Method A cleanup action levels, additional soil samples and/or groundwater samples may be needed to further characterize the site. The decision to collect additional samples would be based on client approval, regulatory requirements, field conditions, and analytical test results.

8.0 CONDITIONS

The report would be for the exclusive use of our client. Any other entities that would wish to use the report shall notify **EnCo** by executing an Application for Right to Rely. In the event that collection of balance owing is necessary the signatory on this proposal would be responsible for all collection costs including personnel time, finance charges, attorney fees, and related expenses.

The client will be responsible for coordinating the marking of known on-site subsurface piping, utilities, USTs and associated piping (if any), and other buried appurtenant structures prior to commencement of field activities. Items to be provided by the client include the right-of-entry onto the subject property from the current owner to conduct the work. Also, if there are any other

restrictions or special safety requirements regarding this site, these should also be made known to us prior to commencing fieldwork.

The sampling program will not identify all the sources or occurrences of suspected contamination on the subject property. Additional sampling and testing may be warranted based on the results and findings of this proposed assessment. The scope of work is not intended to characterize the horizontal and vertical extent of contamination, but rather would identify areas of contamination at the indicated locations. Additional investigation may be needed to make such determinations.

If you have any questions regarding this proposal, do not hesitate to contact me. Work on this project can be initiated upon providing a signature in the **Notice to Proceed** block, a retainer of **$1,500**, and returning an original copy to **EnCo.**

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation

NOTICE TO PROCEED

The signatory on this contract will be the person responsible for payment of our invoices.

BY: _____ BY: _____
Signature Date Printed Name

FOR: _____ TELEPHONE #: _____
Company Name or Title

SumnerNatlAutoPsl1

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

2002 RATE SCHEDULE

THE MINIMUM CHARGE FOR ALL PERSONNEL IS .25 (1/4 OF AN HOUR) OF THEIR HOURLY RATE

PERSONNEL CLASSIFICATION:	RATE PER HOUR:
Principal Expert Testimony	$148.50 per hour
Principal Project Administration	$ 99.00 per hour
Principal Project Supervision	$ 79.00 per hour
Project Management	$ 79.00 per hour
Technician II	$ 59.00 per hour
Technician I	$ 49.00 per hour
Draftsperson	$ 49.00 per hour
Office Manager	$ 43.00 per hour
Saturday / Sunday / Holiday / >8 Hour Work Day	Hourly Rate x 1.5

ADDITIONAL FEES:	RATE:
Vehicle Mileage (portal to portal)	$0.52 per mile
Subcontractors Laboratory, Engineers, Excavation, Disposal, etc.	Cost + 15%
Environmental Database Report Transaction Screen with TOXICHECK	$115.00
Per Diem Room and board for overnight projects	Cost + 15%
Rental Equipment	Cost + 15%
Shipping and Delivery Charges	Cost + 15%

2002 RATE SCHEDULE (CONTINUED)

Film and Developing Costs	$18.82 per roll
Disposable Field Supplies	$35.00 per day
Additional Report Fee	Cost + 15%

EQUIPMENT FEES:	RATE:
Wetland Flags	$.20 each
Petro FLAG Equipment	$60.00 per day
Petro FLAG Tests	$22.50 per test
Manually Operated Soil Probe	$10.00 per day
Stainless Steel Soil Auger	$25.00 per day
Static Water Level Meter	$35.00 per day
3M – Attest System	$16.00 each vial
Monitoring Well Bailer	$15.00 per day
pH Meter	$25.00 per day

This price quote remains in effect for 90 days. Full payment is due upon receipt of each invoice. Past due accounts are subject to 1.5% finance charge per month.

ROBERT A. SUSS
GRACE M. SUSS
3214 SW 344TH ST. 253-927-4782
FEDERAL WAY, WA 98023-3006

19-854/1250 3135
6978957238

5081

Date 9-27-00

Pay to the Order of Environmental Corporation $1500.00

One Thousand Five Hundred + 00/100 Dollars

Security Features Included. Details on back.

WELLS FARGO

Wells Fargo Bank Northwest, N.A.
914 South 348th Street
Federal Way, WA 98003
www.wellsfargo.com

Memo

MP

⑆125008547⑆6978957238⑈ 5081

EnCo
Environmental
Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

January 17, 2003

Mr. Charles S. Cline, Hydrogeologist
Washington Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

RE: Limited Phase II Environmental Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Cline:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. Enclosed are three (3) copies of the report. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the 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.

According to information reviewed from the WADOE toxic files, the substances listed for consideration in the 1991 site hazard ranking were arsenic, chromium, lead, cadmium, tetrachloroethylene, and xylene. Data in 2002 clearly shows that the concentrations of five of the six substances identified 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. 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.

Mr. Robert Suss would like to have some time to research his options for implementing an on-site or off-site treatment program to remedy the identified lead contaminated soil to current MTCA standards. One option may be to remediate by implementing an on-site treatment program using institutional controls, containment, stabilization, immobilization, etc., and another option would be to remediate by excavation and removal to an off-site, licensed, treatment facility. Either option would be submitted under the WADOE Voluntary Cleanup Program.

Please 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. If you have any questions regarding this report, or require additional information, please contact Mr. Robert Suss and myself. We look forward to hearing from you soon.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation
WADOELtr1

DRAFT LETTER – PLEASE REVIEW

January 12, 2003

Mr. Charles S. Cline, Hydrogeologist
Washington Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

RE: Limited Phase II Environmental Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Cline:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. Enclosed are three (3) copies of the report. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the building.

The primary objective for performing the work is to have the Washington Department of Ecology (WADOE) review this report and to allow the contaminated soil to remain on the site for a period of three years **and** to re-evaluate the number 1 hazard ranking status for the Sumner National Auto Parts site. It is of our opinion that the Sumner National Auto Parts site in Sumner should be assigned a hazard rank score greater than a number 1.

The substances listed for consideration in the 1991 site hazard ranking were arsenic, chromium, lead, cadmium, tetrachloroethylene, and xylene. Data in 2002 clearly shows that the concentrations of five of the six substances identified 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. Total lead levels 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.

Mr. Robert Suss would like to leave the lead contaminated soil on the site for a period of three years. After three years he would resample and retest the impacted area for total lead. If total lead in soil exceeds the MTCA method A cleanup action level after three years it would be remediated to concentrations below the current MTCA method A cleanup action level.

Please notify us if this plan meets your approval **and** provide information as to how to remove or increase the current number 1 hazard ranking number for the site. If you have any questions regarding this report, or require additional information, please contact Mr. Robert Suss and myself. We look forward to hearing from you soon.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation

EnCo Environmental Corporation
P.O. Box 731747
Puyallup, WA. 98373
Telephone: (253) 841-9710
Fax: (253) 841-0264

DATE: 1-16-03 TIME: 11:15

TOTAL NUMBER OF PAGES: 3
(Including Cover Sheet)

CLIENT CODE: Sumner National Auto

FAX TRANSMISSION COVER SHEET

TO: Bob Sver

ORGANIZATION OR FIRM: Sumner National Auto

FAX NUMBER: 253-863-5170

FROM: Jan Kemp

RE: WAOE letter

MESSAGE: How does this look?

Jan

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivery of the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the address above.
Thank you.

If you are having trouble receiving this transmission, please contact us at (253) 841-9710

DRAFT LETTER – PLEASE REVIEW

January 16, 2003

Mr. Charles S. Cline, Hydrogeologist
Washington Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

RE: Limited Phase II Environmental Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Cline:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. Enclosed are three (3) copies of the report. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the 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.

According to information reviewed from the WADOE toxic files, the substances listed for consideration in the 1991 site hazard ranking were arsenic, chromium, lead, cadmium, tetrachloroethylene, and xylene. Data in 2002 clearly shows that the concentrations of five of the six substances identified 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. Total lead levels 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,

DRAFT LETTER – PLEASE REVIEW

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.

Mr. Robert Suss would like to have some time to research his options for implementing an on-site or off-site treatment program to remedy the identified lead contaminated soil to current MTCA standards. One option may be to remediate by implementing an on-site treatment program using institutional controls, containment, stabilization, immobilization, etc., and another option would be to remediate by excavation and removal to an off-site, licensed, treatment facility. Either option would be submitted under the WADOE Voluntary Cleanup Program.

Please 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. If you have any questions regarding this report, or require additional information, please contact Mr. Robert Suss and myself. We look forward to hearing from you soon.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation
WADOELtr1

DRAFT LETTER - PLEASE REVIEW

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

January 6, 2003

Mr. Charles S. Cline, Hydrogeologist
Washington Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

RE: Limited Phase II Environmental Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Cline:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. Enclosed are three (3) copies of the report. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the building.

The primary objective for performing the work is to have the Washington Department of Ecology (WADOE) review this report and to re-evaluate the number 1 hazard ranking status for the Sumner National Auto Parts site. Based on the 2002 soil test results, as presented in this report, the previously identified contaminant concentrations have significantly decreased as compared to levels reported in 1991. It is of our opinion that the Sumner National Auto Parts site in Sumner should be assigned a hazard rank score greater than a number 1.

At this point in time the landowner, Mr. Robert Suss, does not wish to apply under the WADOE Voluntary Cleanup Program. He would like to be notified from your department as to what his options are with the current concentrations of lead in soil **and** also how to remove or increase the current number 1 hazard ranking number. If you have any questions regarding this report, or require additional information, please contact Mr. Robert Suss and myself. We look forward to hearing from you soon.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation

DRAFT LETTER – PLEASE REVIEW

EnCo
Environmental
Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

December 31, 2002

Mr. Robert Suss
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

RE: Limited Phase II Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Suss:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the building.

The objective for performing the work is to have the WADOE review this report and to re-evaluate the number 1 hazard ranking status for the Sumner National Auto Parts site. Based on the 2002 soil test results, the previously identified contaminant concentrations have significantly decreased as compared to levels reported in 1991. It is of our opinion that the Sumner National Auto Parts site in Sumner should be assigned a hazard rank score greater than a number 1.

Please review the attached report. After your review, two copies of this report will be forwarded to the WADOE. **EnCo** appreciates the opportunity to be of service to you on this project. If you have any questions regarding this report, or require additional information, please contact me.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation
LetterRpt1

Invoice

DATE	INVOICE NO.
1/9/2003	511

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

BILL TO

Sumner National Auto Parts
Robert A. Suss
16008 60th Street East
Sumner WA 98390

P.O. NUMBER	TERMS	DUE DATE	JOB #	ENCO #
	Due on receipt	1/9/2003	JMK	E2JK-SumnerNatl-1

SERVICED	DESCRIPTION	QTY	RATE	ITEM	AMOUNT
11/19/2002	Laboratory Testing - Soil tests (#021118-6)	1.800	1.15	LAB101-LAB	2,070.00
11/20/2002	Report Preparation - Manager	3.25	79.00	REP101JK-REG	256.75
11/21/2002	Travel Time - Manager (Lab samples)	0.5	79.00	TRA101JK-REG	39.50
11/21/2002	Vehicle Mileage - Manager (Lab samples)	24	0.52	VEH101JK-52	12.48
11/22/2002	Auto Cad Services (#390)	132.55	1.15	CON104-AUT	152.43
11/24/2002	Travel Time - Manager	0.5	79.00	TRA101JK-REG	39.50
11/24/2002	Vehicle Mileage - Manager	8	0.52	VEH101JK-52	4.16
11/26/2002	Copying (#42899)	1.72	1.15	PRI101-COP	1.98
11/30/2002	Delivery / Pick-up - Manager (Diagrams)	0.25	79.00	DEL101JK-REG	19.75
11/30/2002	Vehicle Mileage - Manager	8	0.52	VEH101JK-52	4.16
12/1/2002	Drafting Diagrams and Maps - Manager	1	79.00	DRA101JK-REG	79.00
12/1/2002	Laboratory Testing (#21121-2)	240	1.15	LAB101-LAB	276.00
12/2/2002	Report Preparation - Manager	4.5	79.00	REP101JK-REG	355.50
12/3/2002	Delivery / Pick-up - Manager	0.25	79.00	DEL101JK-REG	19.75
12/3/2002	Vehicle Mileage - Manager	8	0.52	VEH101JK-52	4.16
12/4/2002	Fee - Film & Processing (One roll)	1	18.82	FEE104-FIL	18.82
12/5/2002	Auto Cad Services (#399)	113.61	1.15	CON104-AUT	130.65
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12/8/2002	Copying (#43030)	13.06	1.15	PRI101-COP	15.02

Thank you for your business.

Total

Invoice

DATE	INVOICE NO.
1/9/2003	511

BILL TO
Sumner National Auto Parts Robert A. Suss 16008 60th Street East Sumner WA 98390

P.O. NUMBER	TERMS	DUE DATE	JOB #	ENCO #
	Due on receipt	1/9/2003	JMK	E2JK-SumnerNatl-I

SERVICED	DESCRIPTION	QTY	RATE	ITEM	AMOUNT
12/9/2002	Travel Time - Manager (Meeting)	0.5	79.00	TRA101JK-REG	39.50
12/9/2002	Meetings - Manager	1	79.00	MEE101JK-REG	79.00
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12/9/2002	Vehicle Mileage - Manager	15	0.52	VEH101JK-52	7.80
12/11/2002	Shipping & Handling (#184290)	21.61	1.15	SHI101-SHI	24.85
12/18/2002	Report Preparation - Manager	7	79.00	REP101JK-REG	553.00
12/19/2002	Report Preparation - Manager	8	79.00	REP101JK-REG	632.00
12/19/2002	Report Preparation - Technician I	0.5	49.00	REP152CJ-REG	24.50
12/20/2002	Report Preparation - Manager	0.75	79.00	REP101JK-REG	59.25
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1/2/2003	Project Management - Manager	0.25	99.00	PRO101JK-REG	24.75
1/3/2003	Printing (#43253)	15.62	1.15	PRI100-PRI	17.96
1/4/2003	Report Preparation - Manager	1	79.00	REP101JK-REG	79.00
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1/9/2003	Printing - One draft report (#43318)	21.97	1.15	PRI100-PRI	25.27
	Progress Billing				

Thank you for your business.

Total $5,994.95

EnCo Environmental Corporation

P. O. Box 731747
Puyallup, WA. 9837
Telephone: 253.841.9710
Fax: 253. 841-0264

DATE: 1-9-03 TIME: 1:15pm

TOTAL NUMBER OF PAGES: 5
Including Cover Sheet

CLIENT CODE: Sumner National

FAX TRANSMISSION COVER SHEET

TO: Robert Sims

ORGANIZATION OR FIRM: Sumner National Auto Parts

FAX NUMBER: 253-863-5170

FROM: Jon Kemp

RE: Draft letters and invoice

MESSAGE: Bob - Please review these 2 letters
- Please pay invoice for completing the Phase II report.
- I will submit draft report to you upon full payment.

Thankyou BOB!

Jon Kemp

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivery of the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the address above. Thank you.

If you are having trouble receiving this transmission, please contact us at 253.841.9710

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DRAFT LETTER – PLEASE REVIEW

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

December 31, 2002

Mr. Robert Suss
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

RE: Limited Phase II Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Dear Mr. Suss:

EnCo Environmental Corporation (**EnCo**) has completed the limited Phase II Environmental Site Assessment (ESA) at the above-referenced property. 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 work included assessing soil quality from previous spills of petroleum hydrocarbons and caustic spray solution that was historically used for spray cleaning automobile engines and parts east of the building.

The objective for performing the work is to have the WADOE review this report and to re-evaluate the number 1 hazard ranking status for the Sumner National Auto Parts site. Based on the 2002 soil test results, the previously identified contaminant concentrations have significantly decreased as compared to levels reported in 1991. It is of our opinion that the Sumner National Auto Parts site in Sumner should be assigned a hazard rank score greater than a number 1.

Please review the attached report. After your review, two copies of this report will be forwarded to the WADOE. **EnCo** appreciates the opportunity to be of service to you on this project. If you have any questions regarding this report, or require additional information, please contact me.

Sincerely,

Jonathan M. Kemp
President, EnCo Environmental Corporation
LetterRpt1

Invoice

DATE	INVOICE NO.
1/9/2003	511

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

BILL TO

Sumner National Auto Parts
Robert A. Suss
16008 60th Street East
Sumner WA 98390

P.O. NUMBER	TERMS	DUE DATE	JOB #	ENCO #
	Due on receipt	1/9/2003	JMK	B2JK-SumnerNatl-1

SERVICED	DESCRIPTION	QTY	RATE	ITEM	AMOUNT
11/19/2002	Laboratory Testing - Soil tests (#021118-6)	1.800	1.15	LAB101-LAB	2,070.00
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Invoice

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	Progress Billing				

Thank you for your business.

Total $5,994.95

DRAFT LETTER – PLEASE REVIEW

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0264

December 31, 2002

Mr. Robert Suss
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

RE: Limited Phase II Site Assessment
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

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Jonathan M. Kemp
President, EnCo Environmental Corporation
LetterRpt1

Invoice

DATE	INVOICE NO.
1/9/2003	511

EnCo Environmental Corporation

Post Office Box 731747
Puyallup, Washington 98373
Office #: (253) 841-9710
Fax #: (253) 841-0204

BILL TO

Sumner National Auto Parts
Robert A. Suss
16008 60th Street East
Sumner WA 98390

P.O. NUMBER	TERMS	DUE DATE	JOB #	ENCO #
	Due on receipt	1/9/2003	JMR	02JK-SumnerNatl-1

SERVICED	DESCRIPTION	QTY	RATE	ITEM	AMOUNT
11/19/2002	Laboratory Testing - Soil tests (#021118-6)	1.800	1.15	LAB101-LAB	2,070.00
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1/3/2003	Printing (#43253)	15.62	1.15	PRI100-PRI	17.96
1/4/2003	Report Preparation - Manager	1	79.00	REP101JK-REG	79.00
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1/9/2003	Vehicle Mileage - Manager	8	0.52	VEH101JK-52	4.16
1/9/2003	Printing - One draft report (#43318)	21.97	1.15	PRI100-PRI	25.27
	Progress Billing				

Thank you for your business.

Total $5,994.95

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

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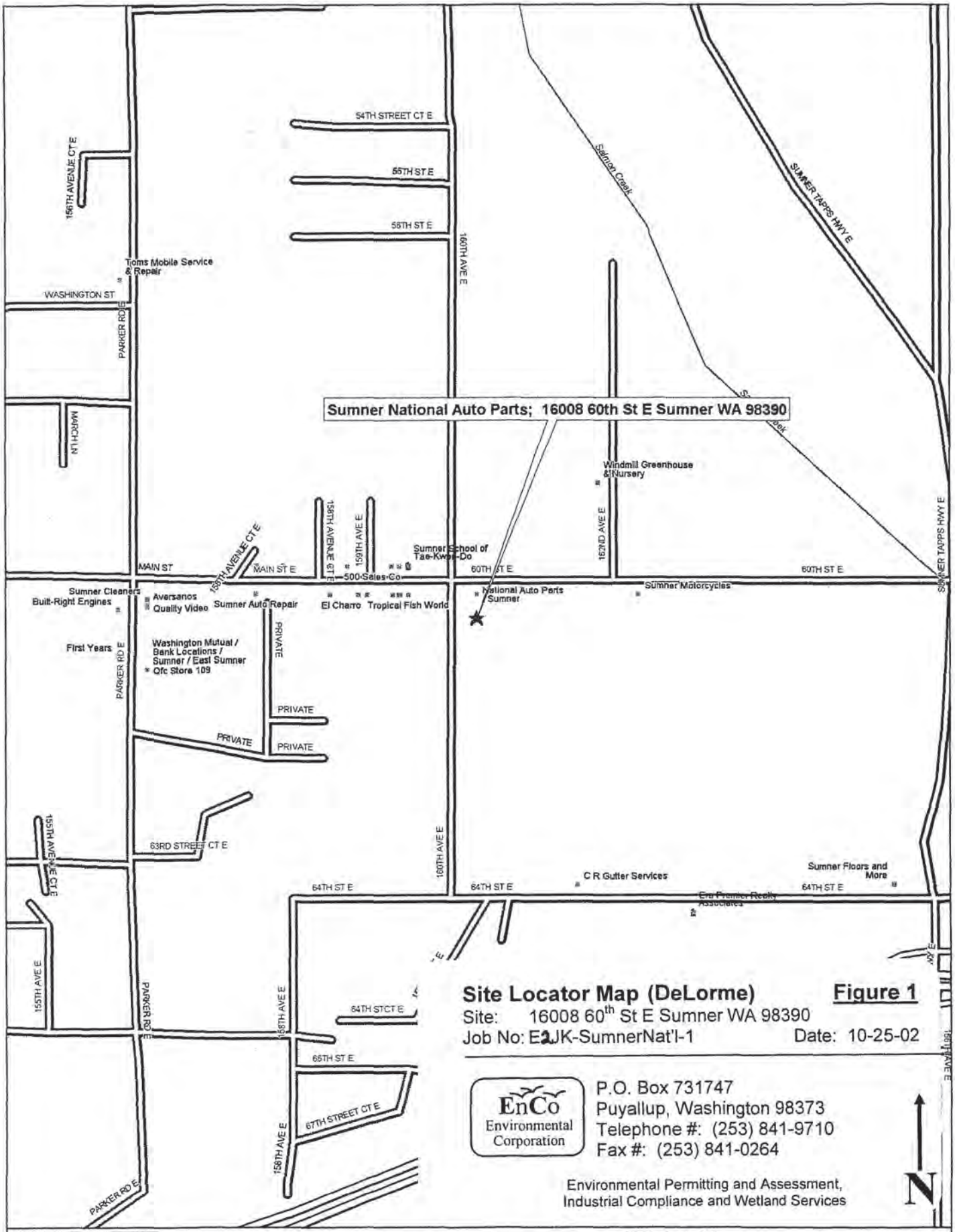
APPENDIX A

Figures



Site Locator Map (DeLorme) **Figure 1**

Site: 16008 60th St E Sumner WA 98390

Job No: E2JK-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

DELORME

© 2001 DeLorme. Street Atlas USA® Deluxe, GDT, Inc., Rel. 01/2001

Zoom Level: 15-0 Datum: WGS84

Scale 1 : 6,400
1" = 533 ft

TN
MN
18.4°E

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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.

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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.

E2JK-SumnerNationalAuto-1 10/07/02

EnCo Environmental Corporation

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.

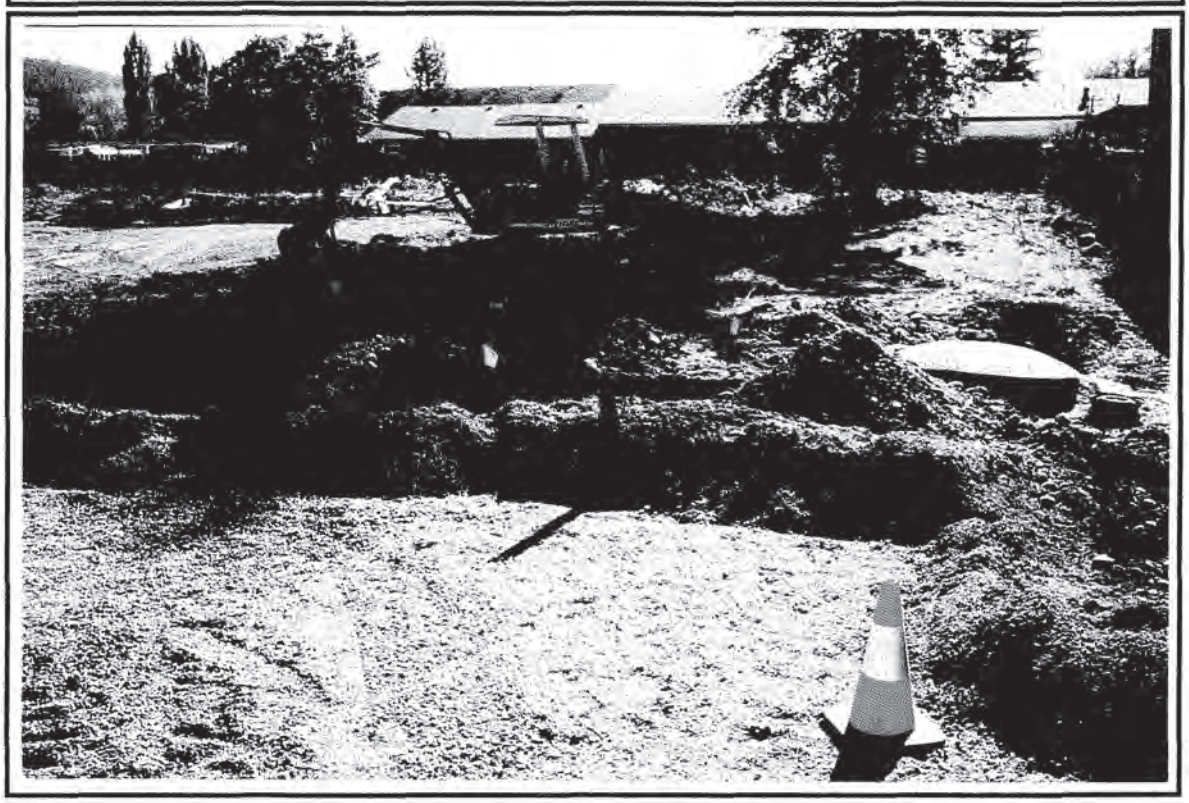

Photo #6: Photograph depicting the assessed area that was formerly impacted with petroleum hydrocarbons, heavy metals, and VOCs from a caustic solution spill and engine spraying activities, facing southeast. Photo taken on 1016/02.

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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.

E2JK-SumnerNationalAuto-1 11/15/02

EnCo Environmental Corporation

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.

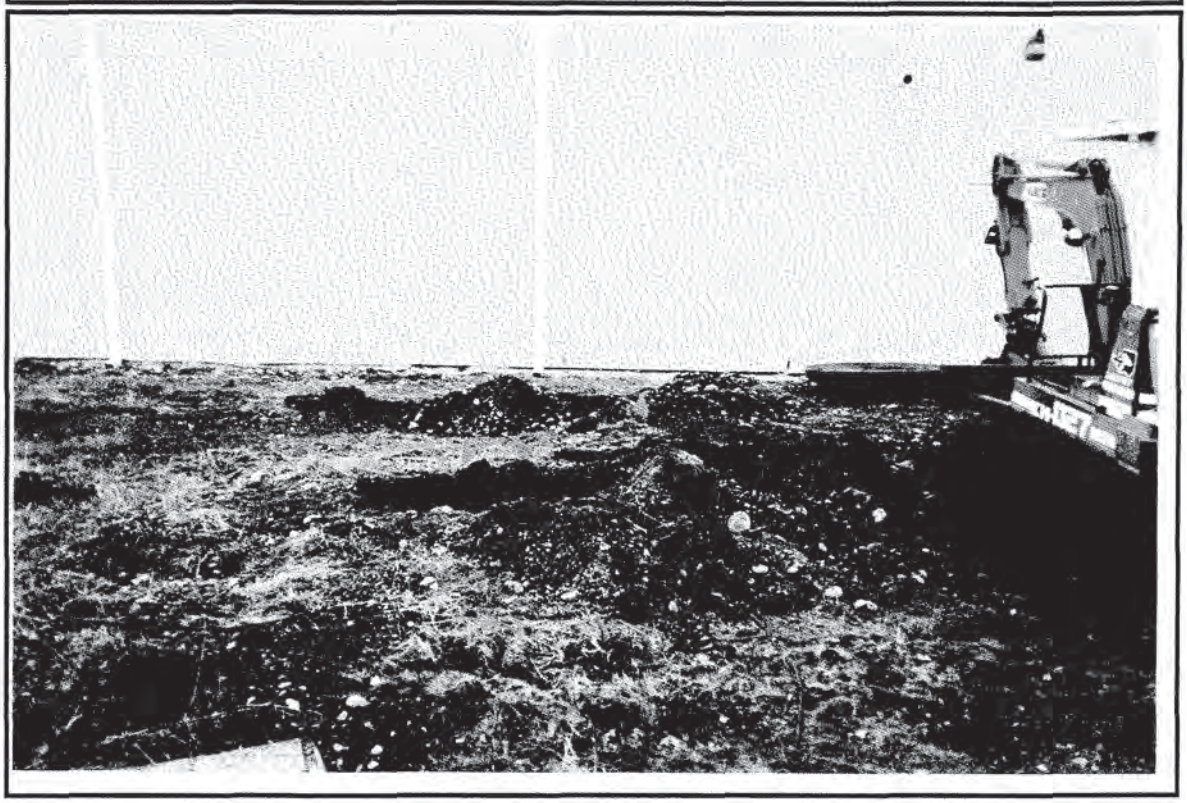

Photo #12: View of the assessed area after the landowner filled and graded in the soil test trenches, facing west. Four to six inches of crushed rock has been placed and graded over some of the assessed area. Photo taken on 12/9/02.

E2JK-SumnerNationalAuto-1 12/09/02

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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
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 3
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 3
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 3
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 3
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 3
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 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

EnCo Environmental Corporation
Environmental Assessment and Remediation Services

Phase I, II & III, Stormwater Plans & Sampling, UST Remediation, Permit Compliance and Wetland Services

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 D
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 D
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 CPM~~ 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.

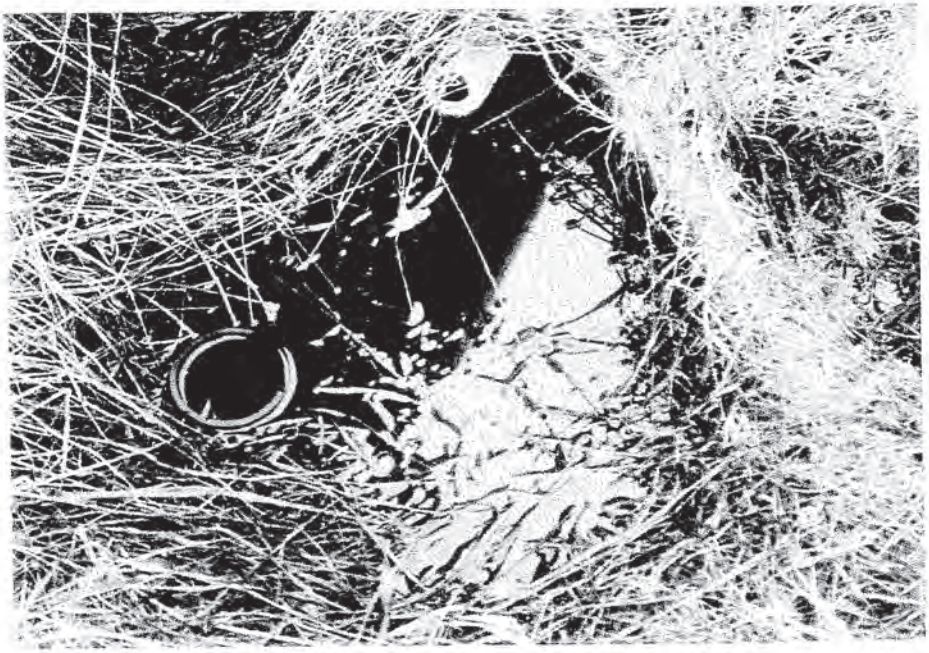
I also recommended to Mr. Suss that he find an alternative method for rinsing engines or controlling rinseate runoff, and that he determine an appropriate method for disposal of metal grinding sludge.

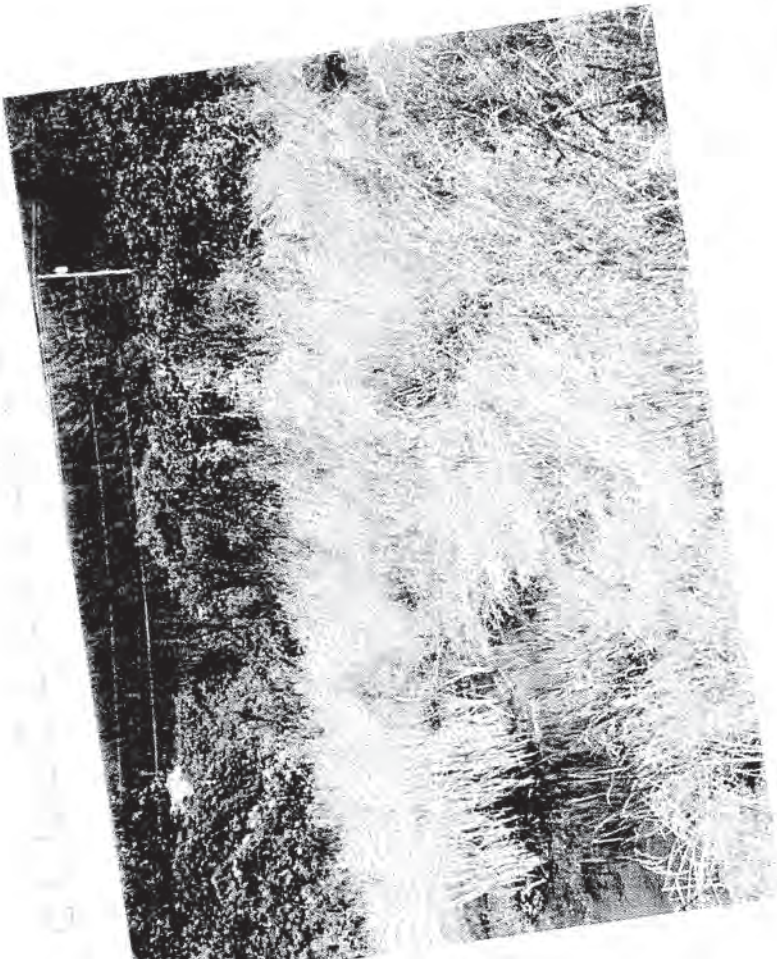
I told Mr. Suss that I would get back to him with the results of the sample analyses.

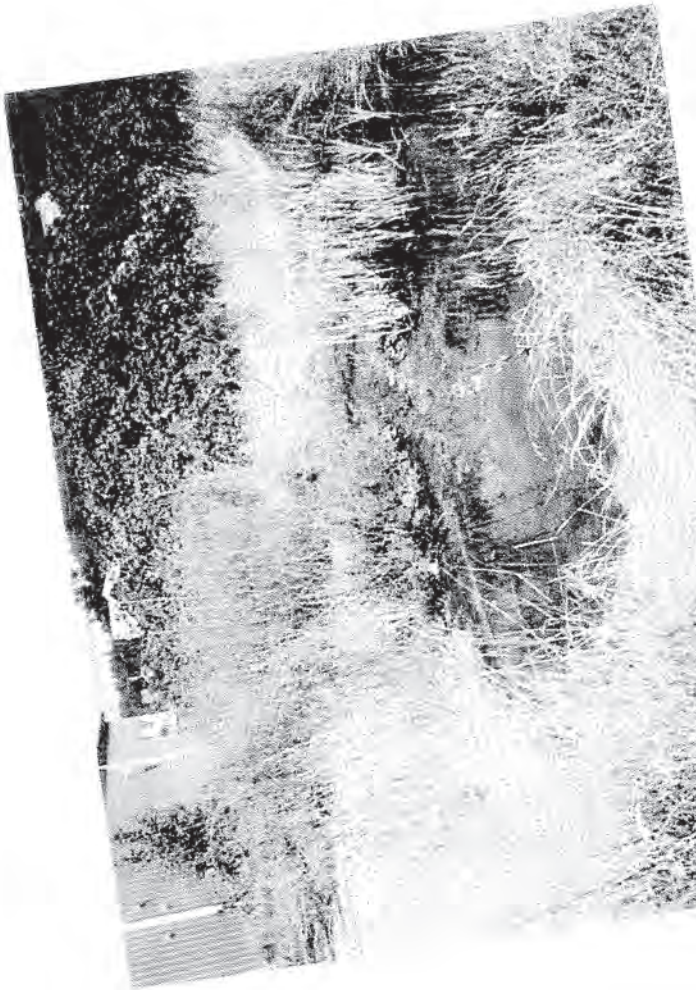
ATTACHMENTS: Site map, Sampling Information Sheet, Sample Data & Analysis Required form, Sample Analysis Results, Photos, TPCHD Memoranda to SNAP.

RECOMMENDATION: Listing on SMIS, Site Hazard Assessment.

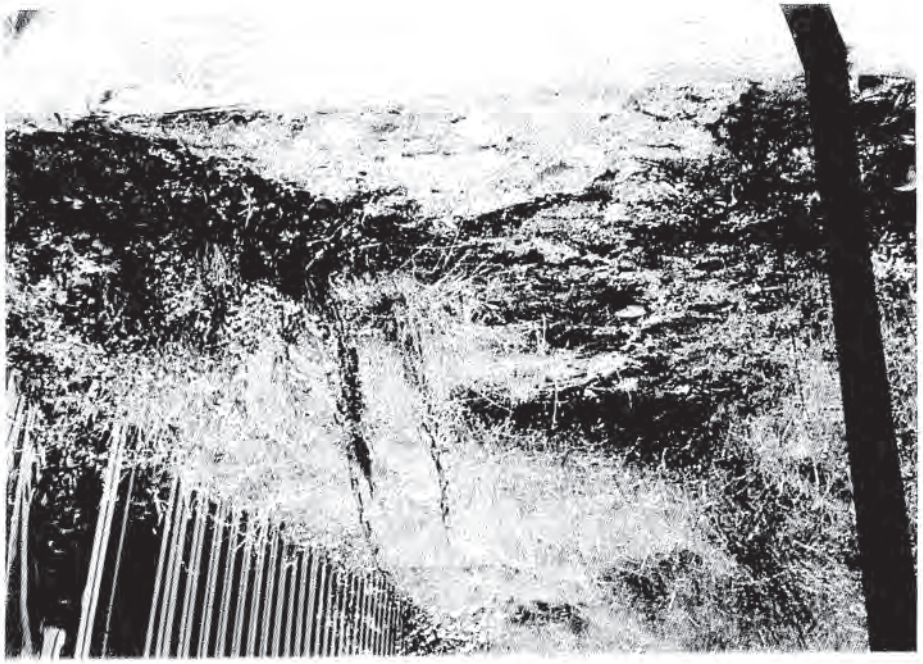
FOLLOW UP: Letter to Mr. Suss regarding recommendations for improving waste management and results of sample analysis.







16.5 6



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 Introduction (WARM Scoring Manual) - Please review before scoring

.2 Human Toxicity

Substance	Air Standard (ug/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcino-genicity 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 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

HRISTINE 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

Megan White
Southwest Region Supervisor
Toxics Cleanup Program

MW:DH:le
Enclosure

EnCo
Environmental
Corporation

APPENDIX G

Laboratory Reports & Chain-of-Custody Forms

EnCo Environmental Corporation
Environmental Assessment and Remediation Services

Phase I, II & III, Stormwater Plans & Sampling, UST Remediation, Permit Compliance and Wetland Services

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

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
Email: 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" 9/k	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 ■ 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.ESNUSA.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 #: E2JK-Sumner Nat'l Auto-1 PROJECT MANAGER: JMK

DATE: 10-3-02 PAGE 1 OF 1
PROJECT NAME: Sumner National Auto Parts
LOCATION: Sumner, WA
COLLECTOR: JmKemp 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			✓					✓				✓	✓	✓		1	
2. SN-1B-SO-15"	15"	1:55	Grab									✓								1	
3. SN-2A-SO-6"	6"	1:45	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									✓									
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.																				13	
17.																					
18.																					

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	10-4-02	[signature]	10/4/02
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

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 Applies
Changes as per J Kemp 10-8-02

Turn Around Time: (5 Day)

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

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 #: E2SW-Sumner Ball-1 PROJECT MANAGER: Jim Kemp

DATE: 10-16-02 PAGE 1 OF 1

PROJECT NAME: Sumner National Air Parts

LOCATION: Sumner WA

COLLECTOR: Jim Kemp DATE OF COLLECTION 10-16-02

Sample Number	Depth	Time	Sample Type (Soils)	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, RS Ball	pH	NOTES	Total Number of Containers	Laboratory Note Number
1. SN-8A-SO-2"	2"	11:25	Grab	4 oz Glass							X							~~Acceptable~~	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
Jim Kemp	10-17 02	[illegible]	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:

10% Discount Applies

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 #: E2SN-Sumner Natl-1 PROJECT MANAGER: Jan Kemp

DATE: 11-15-02 PAGE 1 OF 1

PROJECT NAME: Sumner National Auto Parts

LOCATION: Sumner WA

COLLECTOR: Jan Kemp DATE OF COLLECTION 11-15-02

Sample Number	Depth	Time	ALL Soils Sample Type	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 (+zinc)	Hex Chrome				NOTES	Total Number of Containers	Laboratory Note Number
1. SN-15A-SO-0.25	.25'	1:50	Grab	4 oz glass			✓				✓								✓							1	
2. SN-15B-SO-0.75'	.75'	1:55					✓				✓								✓							1	
3. SN-16A-SO-0.25'	.25'	2:05					✓				✓								✓							1	
4. SN-16B-SO-0.75'	.75'	2:15					✓				✓								✓							1	
5. SN-17A-SO-0.25'	.25'	2:30									✓								✓							1	
6. SN-17B-SO-0.75'	.75'	2:40									✓								✓							1	
7. SN-18A-SO-0.25'	.25'	2:50									✓								✓							1	
8. SN-18B-SO-1'	1.0'	3:00									✓								✓							1	
9. SN-19A-SO-0.33'	0.33'	3:10									✓								✓							1	
10. SN-19B-SO-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
Jan Kemp	11-18-02 9:00 A.M.	McKinley	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

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.

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: [9171082133393970427438]

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

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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.

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.

Attachment A

Model Grant and Permit Condition

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.)

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:

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371

Signature of Preparer: _____

May 23, 2017

Job # E3JK-Sumner-Auto-Parts-3

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3. Sumner SEPA Determination Non-Significance with Application & Environmental Checklist
4. Sumner Erosion Control Permit (TESC) & Fill and Grade Permit
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7. Soil Sample Field Data Form (Example)
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9. Holocene Drilling, Inc. Daily Direct Push Drilling Log (MW-1)
10. Hydraulically Probed Soil Log & Monitoring Well Details (MW-1) with Key
11. ASTM Unified Soil Classification System Sheet
12. Safety & Health Plan (Abbreviated)
13. EnCo Limited Phase II Site Assessment, Sumner National Auto, Jan. 17, 2003
14. Ecology Site Hazard Assessment Documents 1990 – 1992 (See #14 Above)
15. Pierce County Assessor & Treasurer Parcel Data Sheets
16. Resumes of Key Personnel

APPENDIX D LABORATORY TEST REPORTS – EnCo 2015

Laboratory Test Reports & Chain-of-Custody Forms – 2015

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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INDEPENDENT REMEDIAL CLEANUP ACTION WORK PLAN

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

Ecology VCP ID: SW1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304
Ecology VCP Reviewer: Mr. Tim Mullin, L. G.

May 23, 2017

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 1/100th 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.

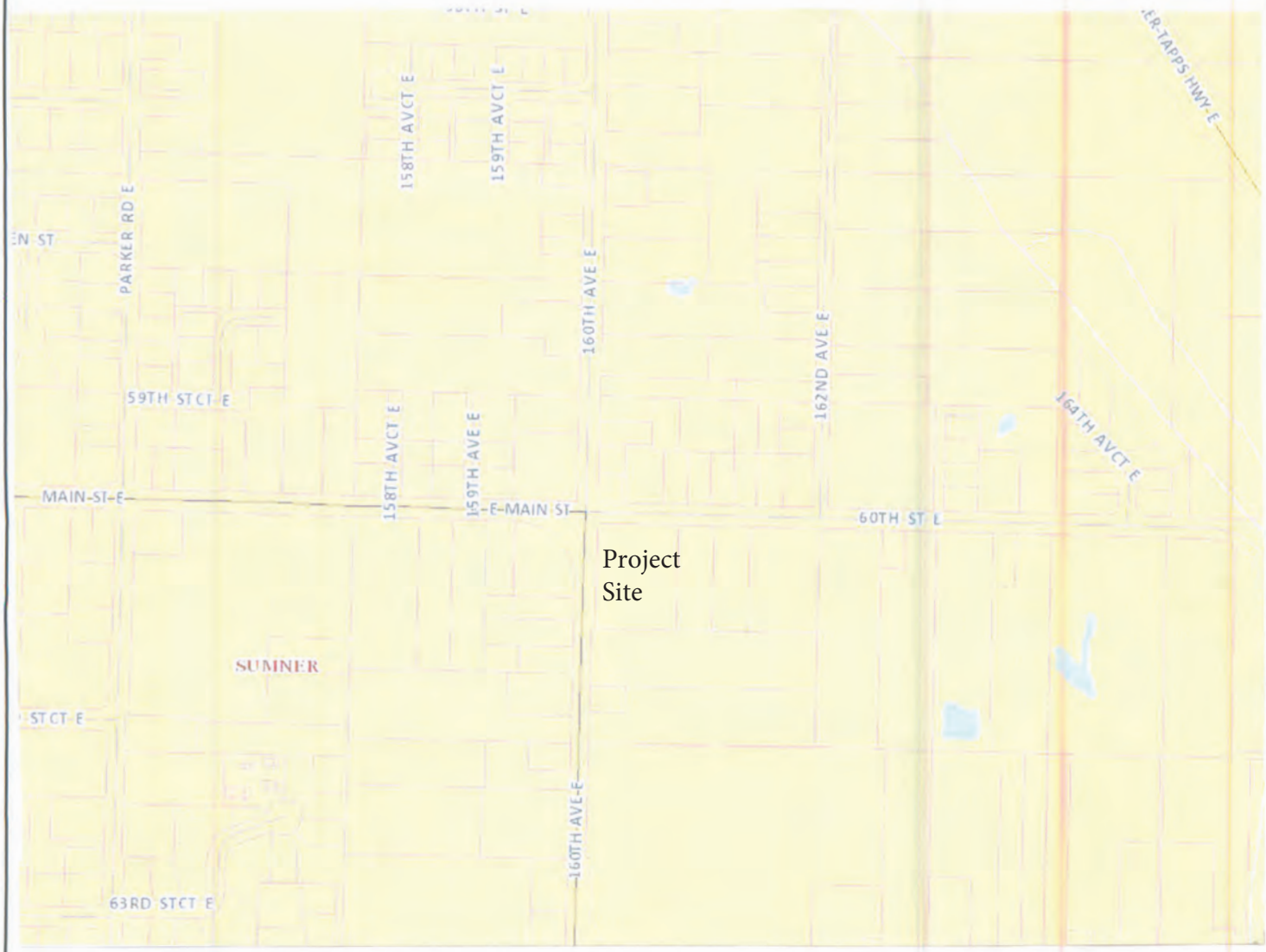
Washington State Department of Ecology, Olympia WA, Toxics Cleanup Program, Guidance on Sampling and Data Analysis Methods: Publication No. 94-49, January 1995.

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

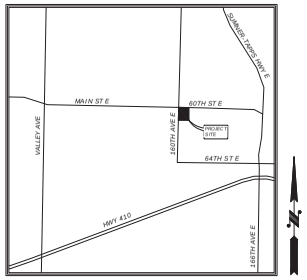
POB 1212
Puyallup WA 98371
Tele: 253.841.9710
www.encoec.com

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

SUMNER NATIONAL AUTO PARTS STORE

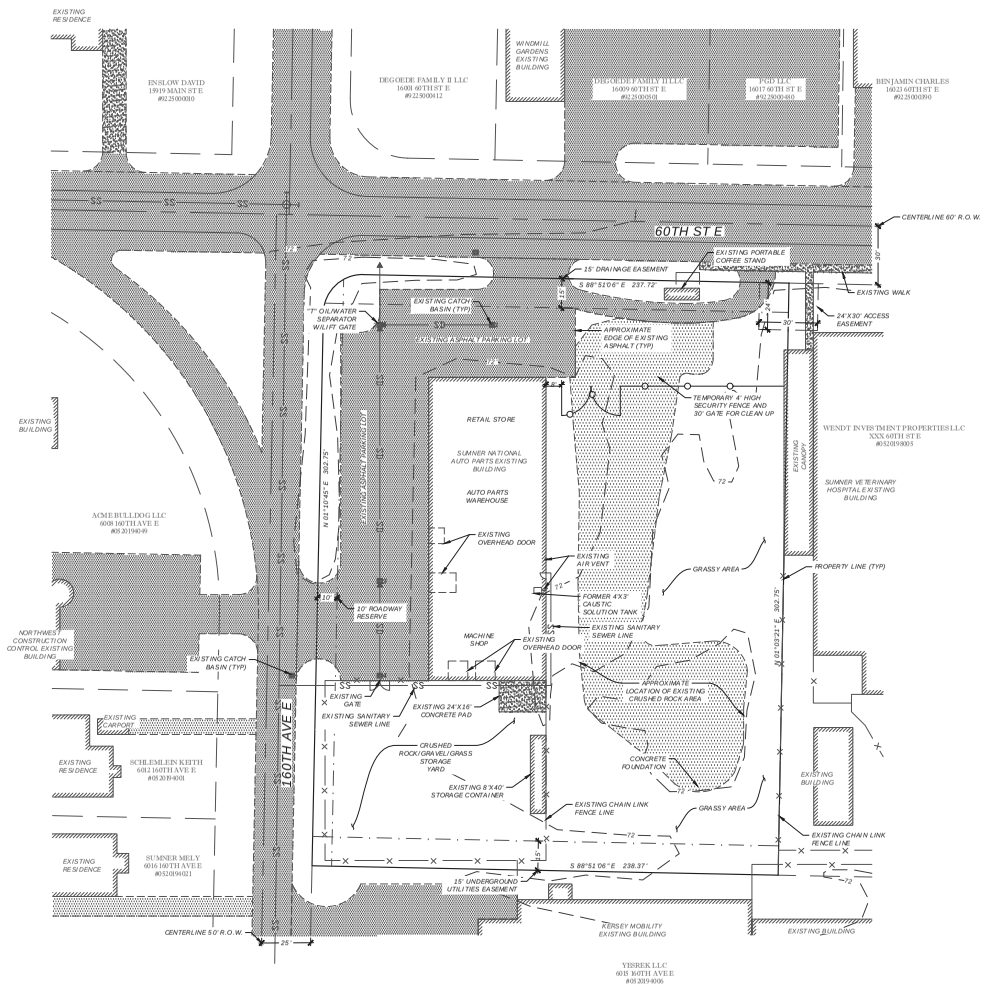
16008 60TH ST E

SITE PLAN - BEFORE CLEAN UP



VICINITY MAP

N.T.S



EnCo Environmental Corporation

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

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 (DCWJES1 1-5-82) (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

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Lakewood, WA 98499
phone: 253-301-4157
fax: 253-336-3950

ISSAQUAH OFFICE
445 Front Street N
Issaquah, WA 98027
phone: 425-392-0255
fax: 425-392-0108

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PROFESSIONAL OWNERSHIP | TRANSPARENT | PERSONALIZED

SITE PLAN - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 3

CITY OF SUMNER, WASHINGTON

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
KEX	BME	HORZ: 1"=30' VERT: N/A	08/09/2016

JOB NUMBER 16-243

SHEET FIG.3 OF

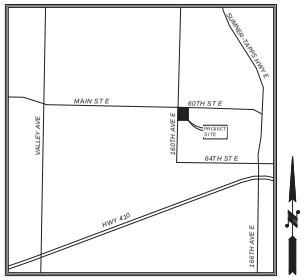
CAD FILE: K:\Projects\16-000\16-243 Sumner National Auto Parts, Jonelton Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg PLOT DATE/TIME: 1/12/2017 – 9:32am

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

SUMNER NATIONAL AUTO PARTS STORE

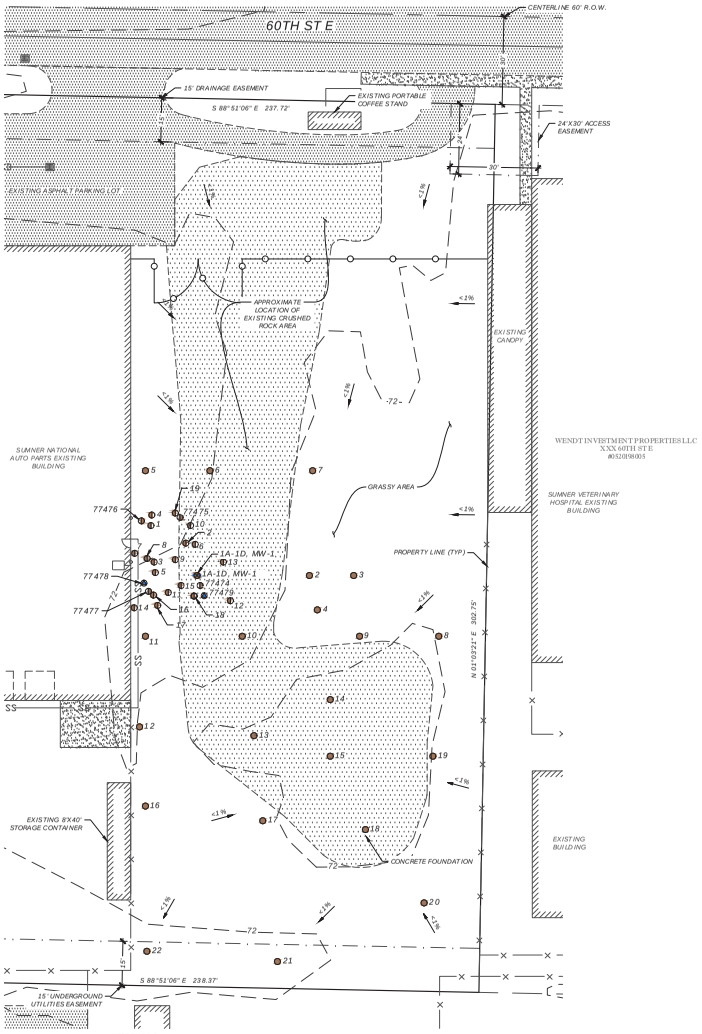
16008 60TH ST E

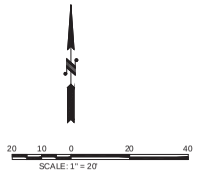
SOIL AND GROUNDWATER MONITORING WELL SAMPLE LOCATIONS - BEFORE CLEAN UP



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

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ZONING:	GC (GENERAL COMMERCIAL)
SETBACKS:	
FRONT:	5' MIN/25' MAX
BACK:	20'
INTERIOR:	5'

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CLIENT:
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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

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fax: 253-336-3950

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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

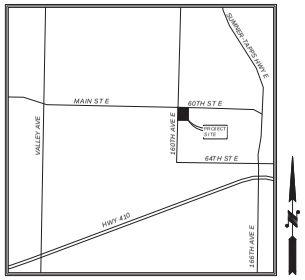
CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathan Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg PLOT DATE/TIME: 1/12/2017 – 9:32am

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

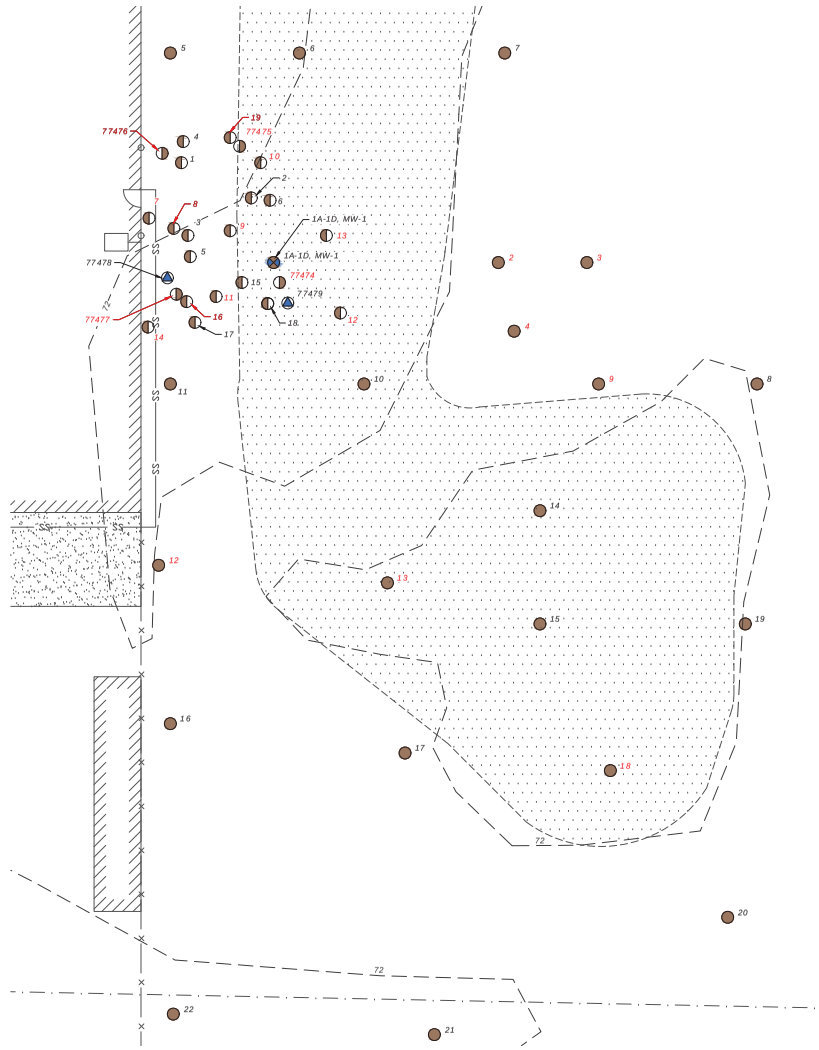
TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
1	1A (.75') 1B (2') 1C (5') 1D (10')	H0-ND, CD-ND, PB-105 H0-ND, CD-ND, PB-1.2 H0-ND, CD-ND, PB-1.13 CD-ND, PB-ND
2	2A (.5')	CD-ND, PB-172
3	3A (.5')	CD-ND, PB-225
4	4A (.5')	**CD-3.5, PB-1870**
5	5A (.5')	H0-ND, CD-ND, PB-113
6	6A (.5')	CD-ND, PB-33.6
7	7A (.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

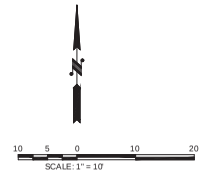
NOTES:
SURFACE WATER AND GROUND WATER SAMPLES DID NOT EXCEED MTCA CULS FOR THE TESTED COCS.

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.





SITE DATA

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SITE ADDRESS:	16008 60TH ST E
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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

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)

NO.	DESCRIPTION	INIT	DATE

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

ISSAQUAH OFFICE
4635 Sunset Blvd N
Issaquah, WA 98027
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PROJECT MANAGEMENT | FEASIBILITY STUDIES | PERMIT EXPEDITING

SAMPLE DATA - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 5

CITY OF SUMNER, WASHINGTON

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
KW	BME	HORZ: 1"=10' VERT: N/A	08/09/2016

JOB NUMBER 16-243

SHEET FIG.5 OF

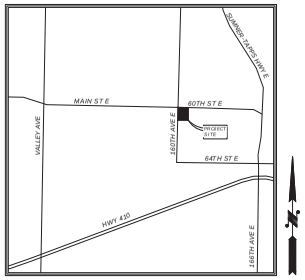
CAD FILE: K:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg PLOT DATE/TIME: 1/12/2017 - 9:32am

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

SUMNER NATIONAL AUTO PARTS STORE

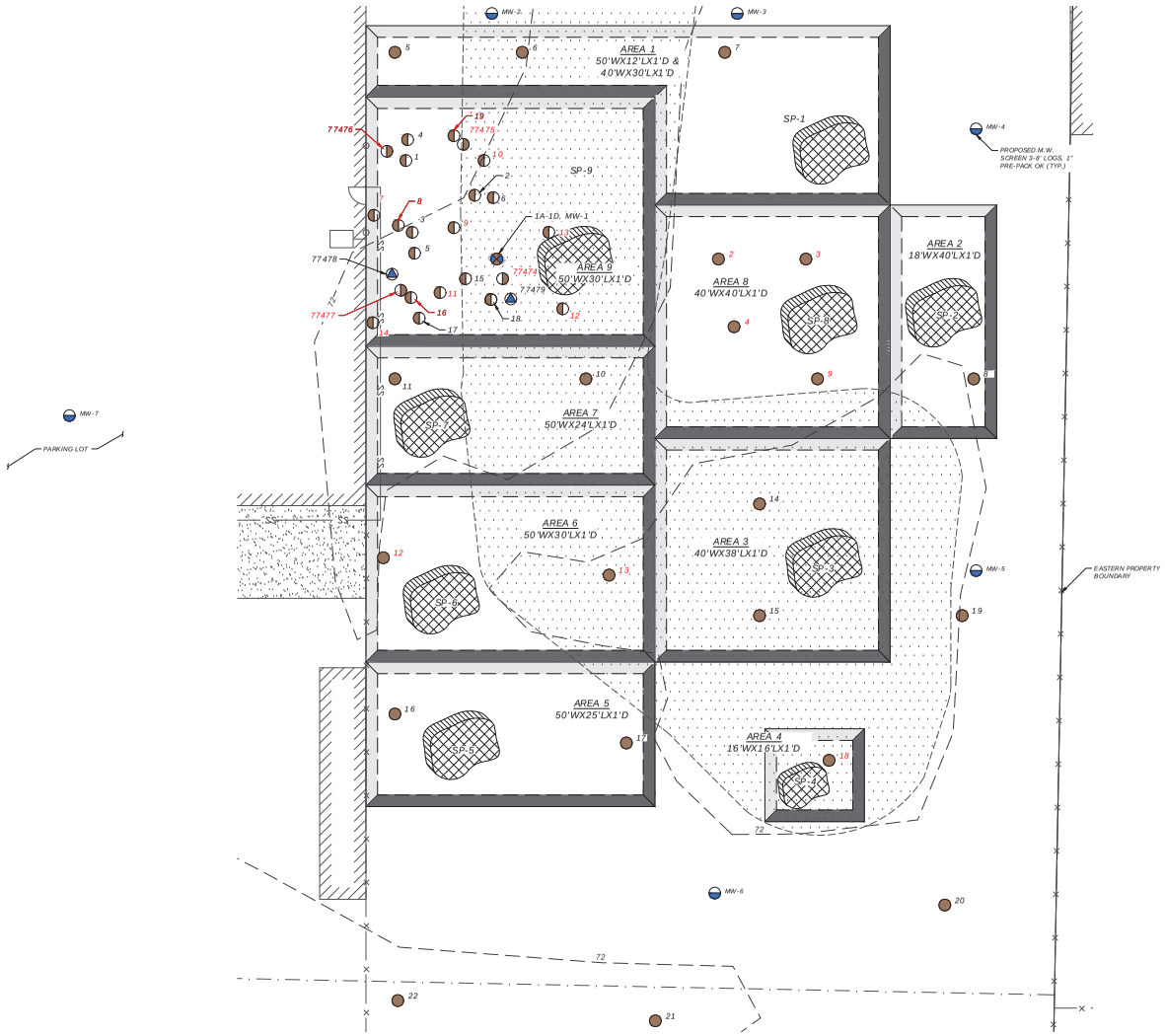
16008 60TH ST E

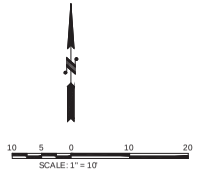
EXCAVATION FOOTPRINTS & TEMPORARY SOIL STOCKPILE - PROPOSED DURING CLEAN UP



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

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EXCAVATION & STOCKPILES - DURING CLEAN UP

16008 60TH ST E

FIGURE 6

CITY OF SUMNER, WASHINGTON

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

JOB NUMBER 16-243

SHEET FIG.6 OF

CAD FILE: K:\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: 1/26/2017 – 4:17pm

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

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
- ☐ Other – please specify: _____
- ☐ School
- ☐ Childcare facility
- ☐ Park

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
☐ Other – please specify:
☐ School
☐ Childcare facility
☐ Park

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: [9171082133393970427438]

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 <u>and</u> 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 <u>not</u> 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

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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

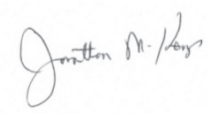
1. Project will first require SEPA environmental review. Please complete a SEPA application form and a SEPA checklist. **Response**: One (1) copy of the completed and signed SEPA application form and four (4) copies of the completed and signed SEPA Environmental Checklist are included with this submittal.

   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)

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

CITY OF SUMNER WASHINGTON

File Number: SIT-2016-0146

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")**

- Legal Descriptions of existing and proposed lots
- Vicinity map and site zoning
- Property line dimensions and square footage of new lots
- Existing public and private roads, driveway access and all easements
- Existing and proposed fire hydrant locations or distance to the nearest hydrants
- All major man-made features; drainage ditches, railroad tracks, etc.
- Existing building locations and setbacks from property lines (if any)
- Proposed access width
- Building envelopes and lot number assigned to each lot
- Location of nearest existing utilities including sanitary sewer, storm drainage, and water services
- 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

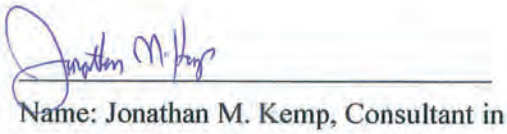
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

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

CITY OF SUMNER WASHINGTON

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

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PROJECT MANAGEMENT | PERMIT EXPEDITING | FEASIBILITY

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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	-

<u>Minimum Requirements (per 2005 Manual)</u>

<u>Minimum Requirement #1: Preparation of a Stormwater Site Plan.</u>
Requirement met with this drainage report and plan

<u>Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)</u>
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.

<u>Minimum Requirement #3: Source Control of Pollution</u>
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

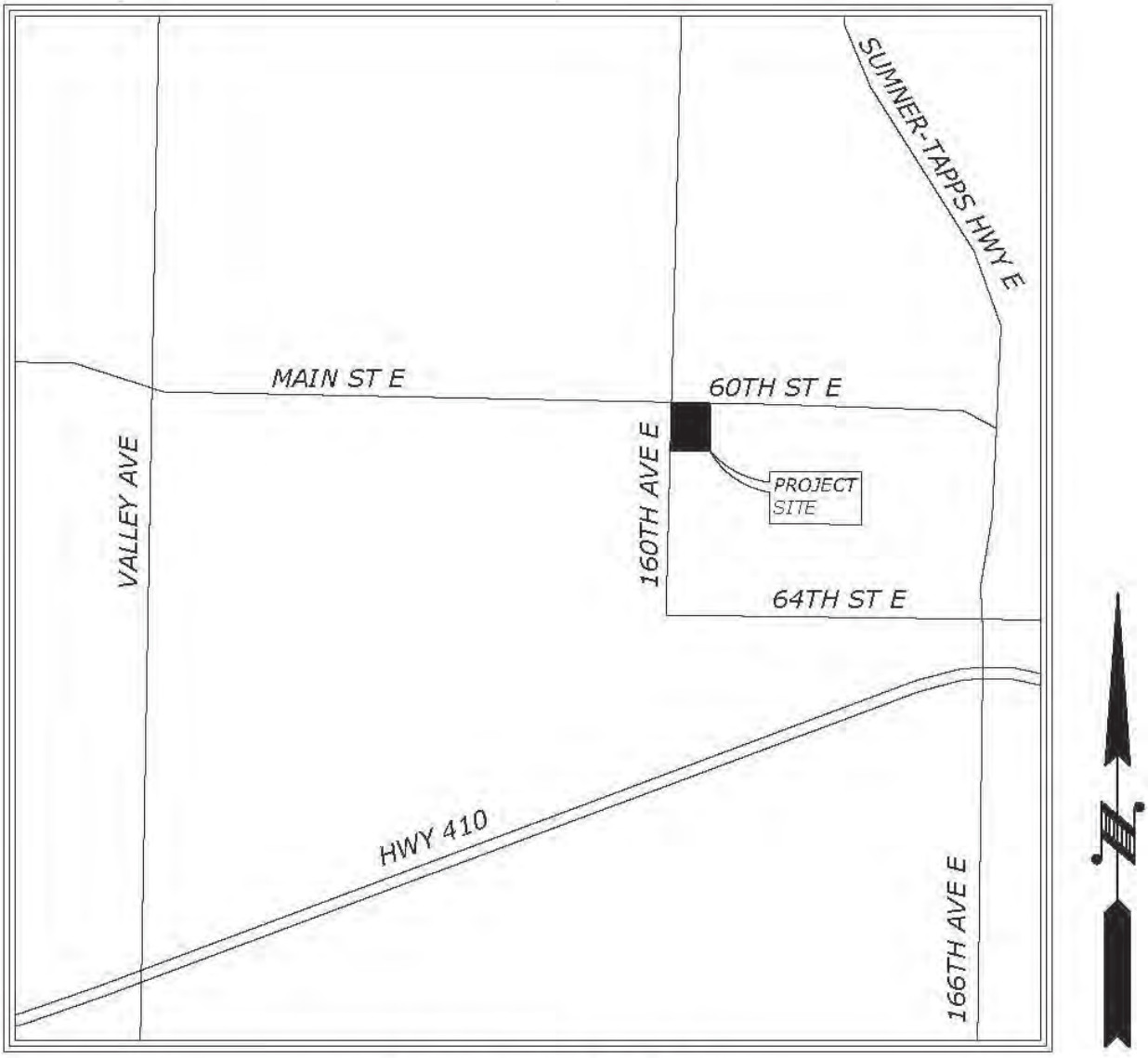
No property owner's association is required for this project.

Section 13 – Other Permits or Conditions Placed on the Project

None.

III. Appendices

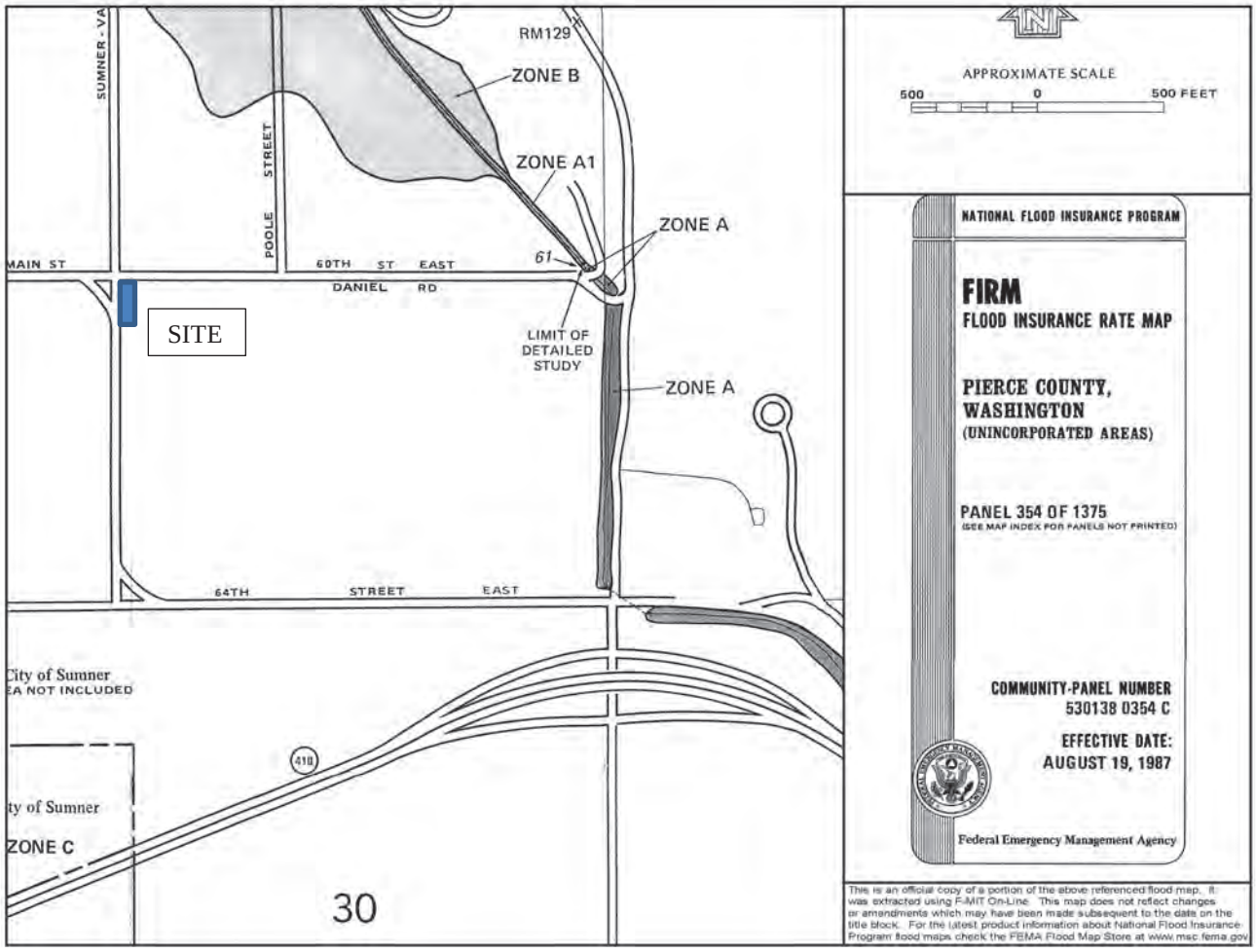
Appendix A – Vicinity Map



VICINITY MAP

N.T.S

Appendix B – FEMA Map



Appendix C – Other Charts

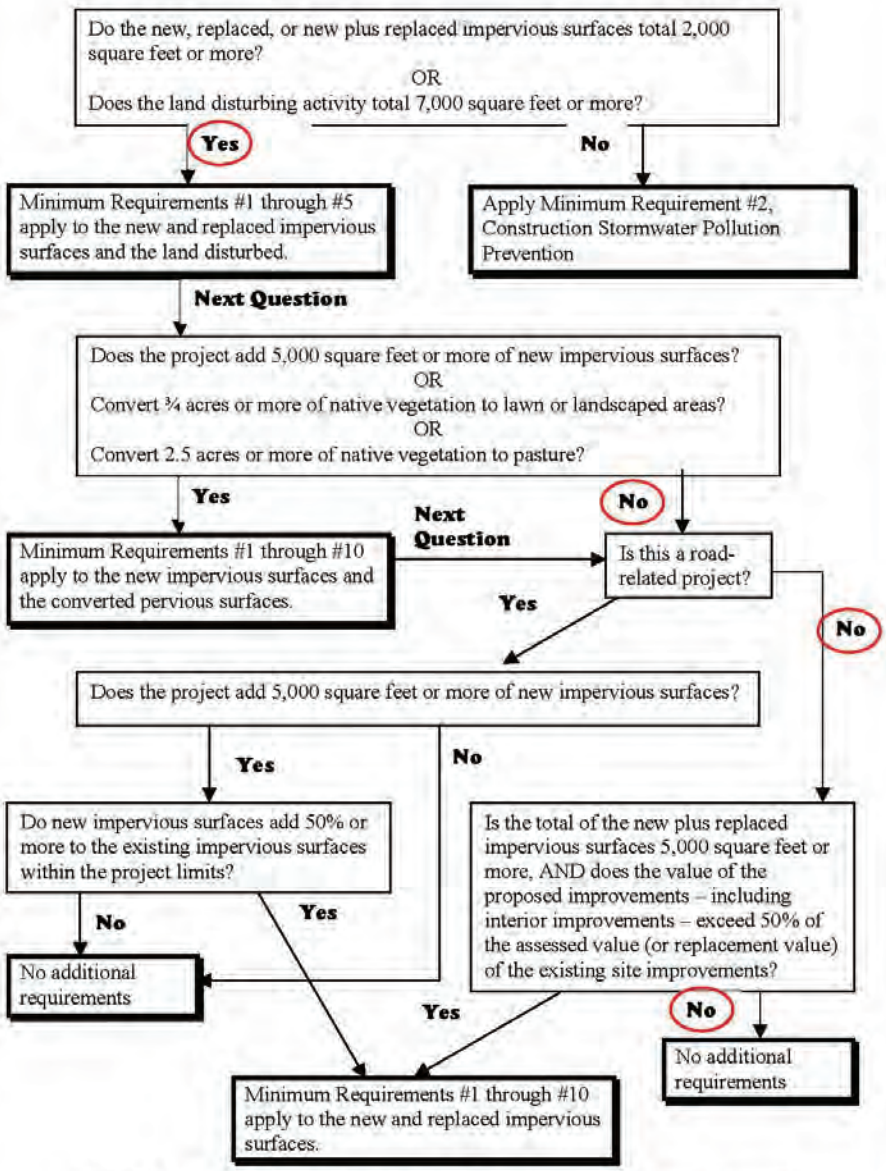


Figure 2.3 – Flow Chart for Determining Requirements for Redevelopment

Appendix D – Geotechnical Report

United States Department of Agriculture

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

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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.

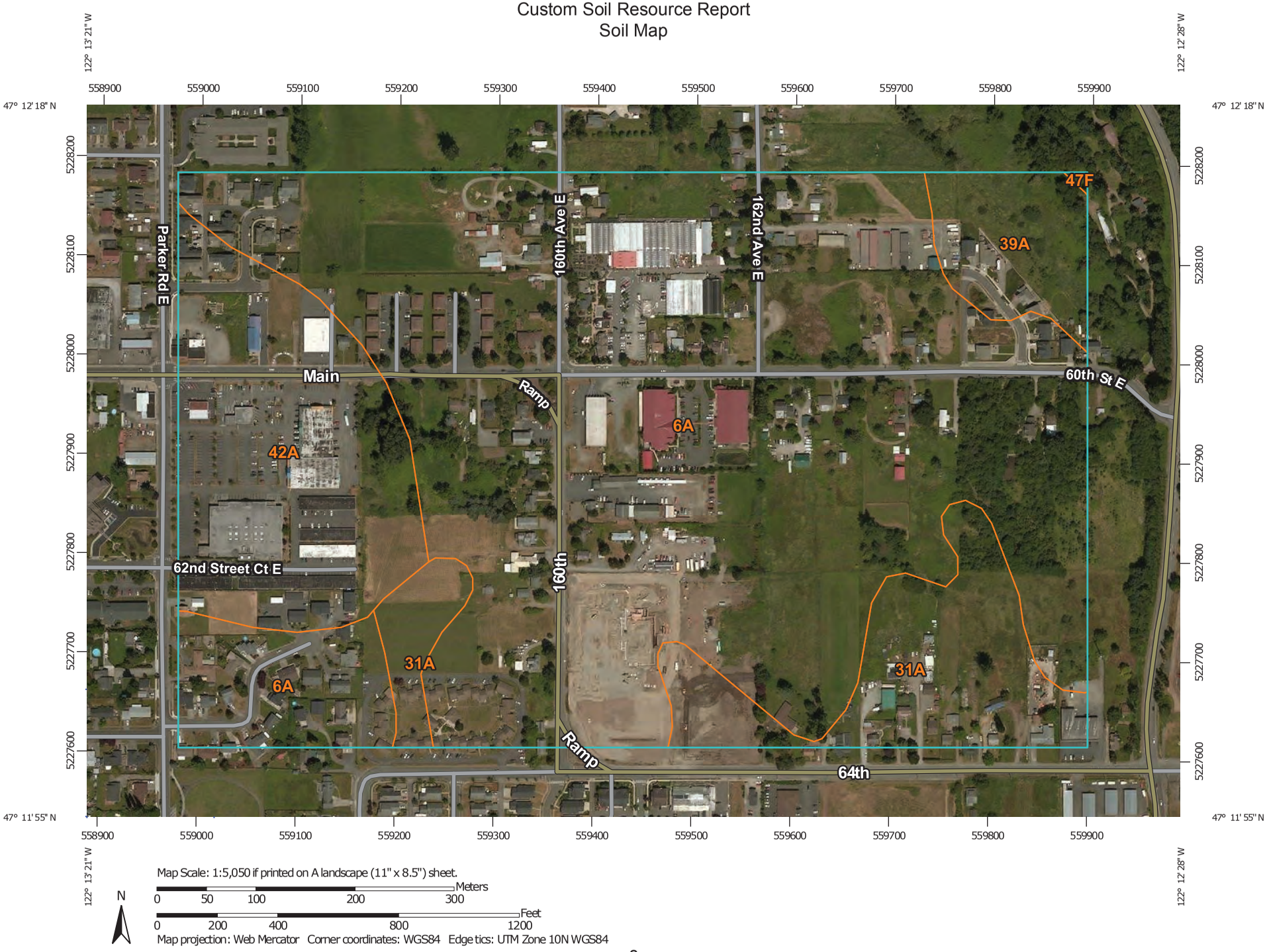
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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 Scale: 1:5,050 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

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.
Beyler Consulting
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Lakewood, WA 98499
(253) 301-4157

Project Number: 16-243
Project Name: 16008 60TH STREET E, SUMNER
16243-RPT- CSWPPP 16008 60th Street E 2016.08.24.docx

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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

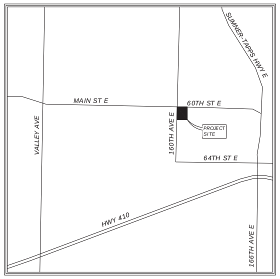
Erosion control procedures as described in this report and illustrated on the design plans, if properly implemented, should mitigate effects from the development of this project.

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

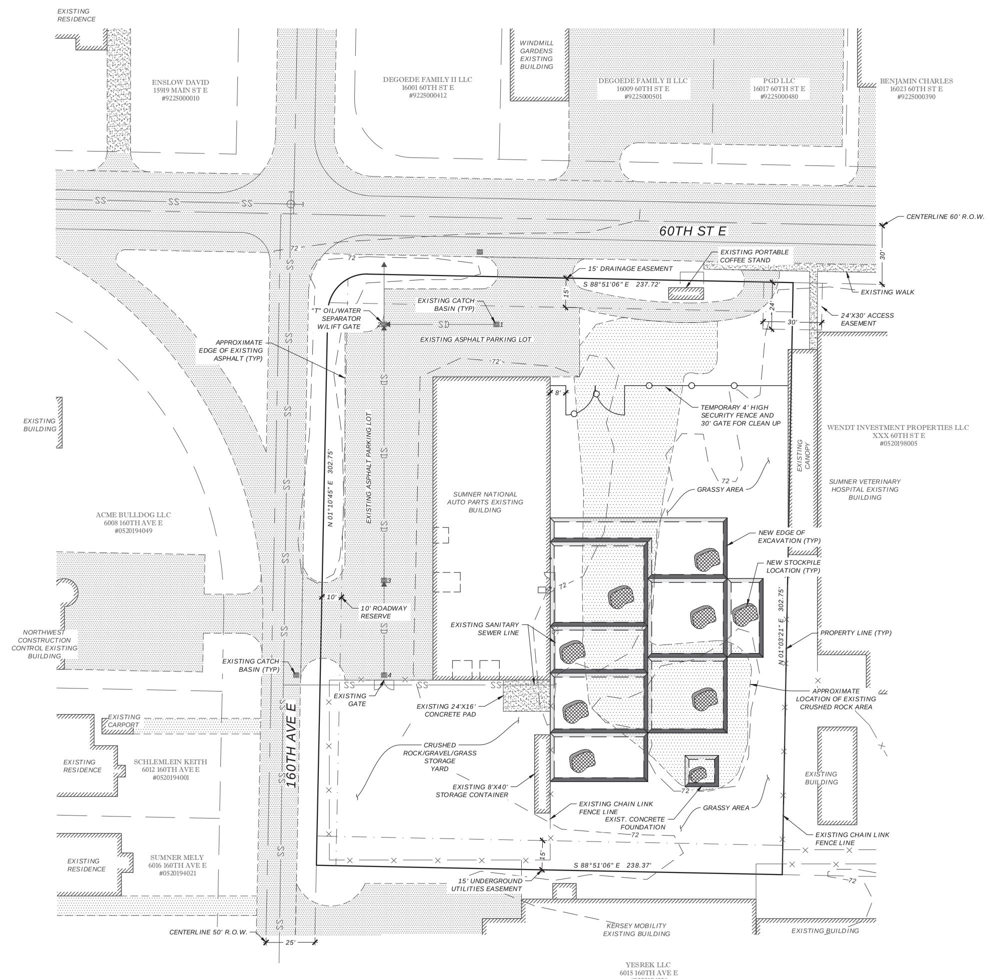


VICINITY MAP

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.



SCALE: 1" = 30'

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

CITY OF SUMNER PROJECT/PERMIT NUMBER SIT-2016-0146

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

BEYLER CONSULTING
Plan. Design. Manage
CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING
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fax: 253-336-3950
ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
fax: 425-392-0108
beylerconsulting.com

COVER SHEET - SITE 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

12/20/16

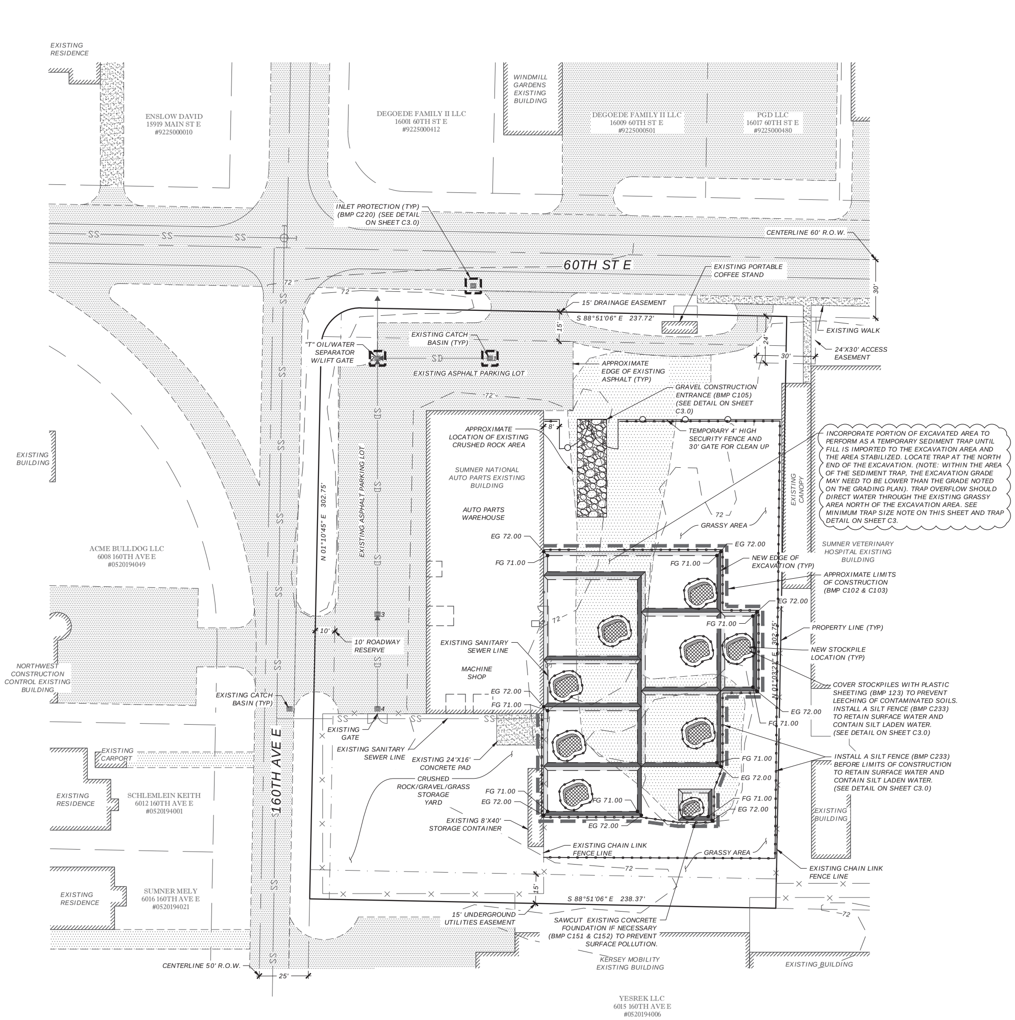
JOB NUMBER 16-243

SHEET 1 OF 3

C1.0

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 - 9:33am

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



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.

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.

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 PROJECT/PERMIT NUMBER SIT-2016-0146

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

BEYLER CONSULTING
Plan. Design. Manage
CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING
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fax: 425-392-0108
beylerconsulting.com

GRADING, DRAINAGE, AND T.E.S.C. 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

12/20/16

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

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

TEMPORARY CONSTRUCTION ENTRANCE CRITERIA FOR ESC, 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	<20,00	<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 4ARD SURFACE APPROACH WITHIN THE LIMITS OF THE RIGHT-OF-WAY PROTECTS THE CITY STREET AND REDUCES THE POTENTIAL OF ROCKS GETTING ONTO THE STREET.

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:

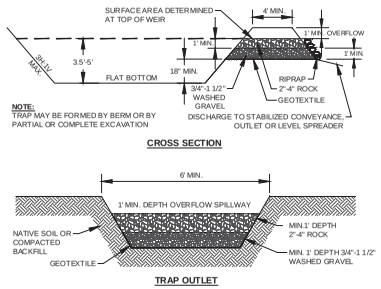
1. SEE SUMNER STANDARD DETAIL M-8.1 FOR LAYOUT OF ENTRANCE.
2. A SEPERATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENTS FROM PUMPING UP INTO THE ROCK PAD. THE FABRIC SHALL CONFORM TO WSDOT STANDARD SPECIFICATION 9-33, TABLE 3 FOR SOIL STABILIZATION FABRIC.
3. FENCING SHALL BE 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:

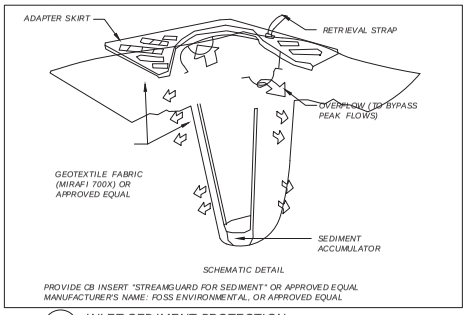
1. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES SHALL BE REQUIRED WHICH MAY INCLUDE STREET SWEEPING, INCREASING DIMENSIONS OF THE ENTRANCE OR THE INSTALLATION 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 REPRESENATIVE.

P:\Standard Details\DRAFTING\M-8.2.DWG

The City of Sumner Public Works Department
SUMNER
TEMPORARY CONSTRUCTION ACCESS – NOTES
DATE: 9/3/2007 K.F.S. | STANDARD DETAIL MISC.
LAST REVISION: 1/3/10
SHEET 1 of 1 | FILE NO. M-8.2

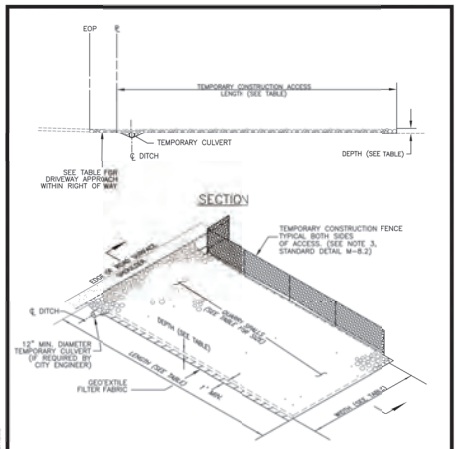


1 C3 SEDIMENT TRAP DETAIL



2 C3 INLET SEDIMENT PROTECTION

SCALE: N.T.S.



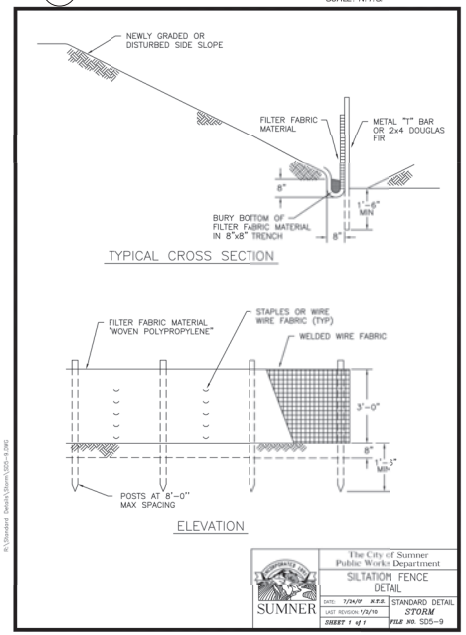
NOTE:

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\DRAFTING\M-8.1.DWG

The City of Sumner Public Works Department
SUMNER
TEMPORARY CONSTRUCTION ACCESS
DATE: 9/3/2007 K.F.S. | STANDARD DETAIL MISC.
LAST REVISION: 1/30/10
SHEET 1 of 1 | FILE NO. M-8.1



P:\Standard Details\Storm\SD5-9.DWG

The City of Sumner Public Works Department
SUMNER
SILTATION FENCE DETAIL
DATE: 7/24/97 K.F.S. | STANDARD DETAIL STORM
LAST REVISION: 1/3/10
SHEET 1 of 1 | FILE NO. SD5-9

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

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CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY STUDIES | CONSTRUCTION

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:	CHECKED BY:	SCALE:	DATE:
KM/MEM	BML	HORZ: 1"=30' VERT: N/A	09/23/2016

JOB NUMBER 16-243

SHEET 3 OF 3

C3.0

CAD FILE: K:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon 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 SB-TI
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:

7/29/16
Joseph Gallagher, TPCHD (253)798-6566

Cc: LRI LF Scalehouse via Fax – 253 875 7205

APPROVED

JUL 28 2016

TACOMA-PIERCE COUNTY HEALTH DEPT.
ENVIRONMENTAL HEALTH DIV.
For Official Use Only

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**: _____

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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:	16008 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	9:00	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:	1/2	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:	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 Classificatio	Color	Moisture	Sample Depth (bgs)
1A	0.2	Grab		30"	ML		Moist	0.75'
1B	0.1	Grab		30"	GP		Moist	1'-2'
1C	0.1	Grab		40"	SW		Smear	4'-5'
1D	0.1	Grab		40"	SW		Wet	9'-10'

Soil Layer (feet): 0 Feet, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Lithographic Description

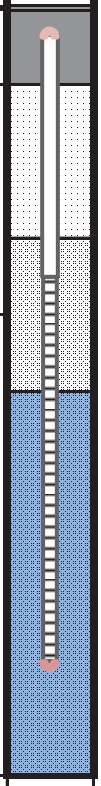
Soil at surface, grey inorganic silt loam with cobbles & crush rock, medium dense, moist, no odor, Fill

Grey brown, poorly graded, sandy gravel, 1.5" - 0.25", irregular and round, medium dense, moist, no odor, Fill

Grey, well sorted, medium sand, loose, very moist to wet, no odor

Bottom of Probe Hole

Monitoring Well Details



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

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

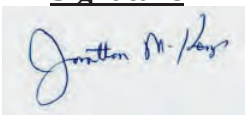
Air Monitoring Equipment: Mini Rae Model 3000 PID meter

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.

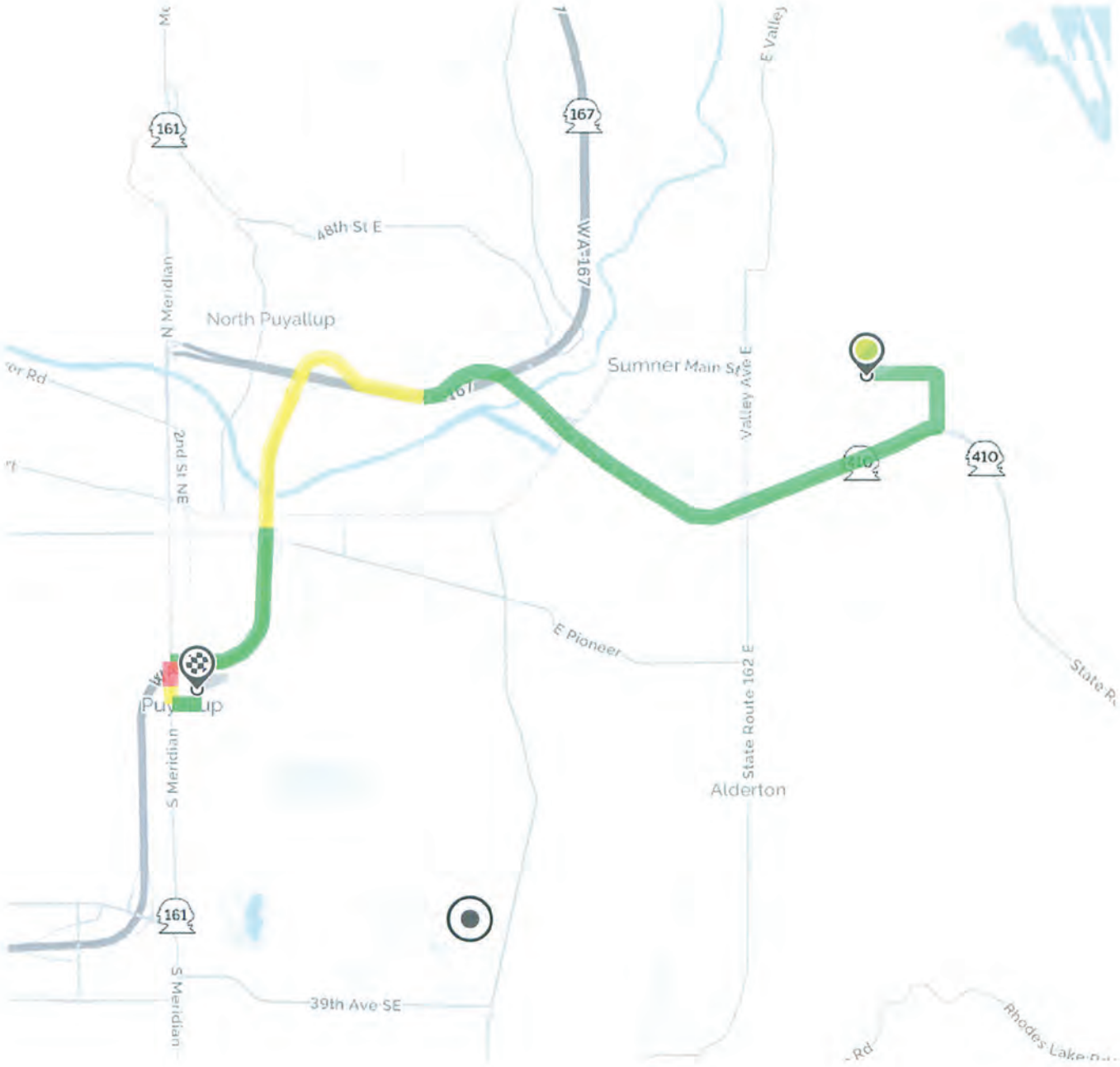
If you reach 17th Ave SE you've gone a little too far.

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.

Use of directions and maps is subject to our Terms of Use. We don't guarantee accuracy, route conditions or usability. You assume all risk of use.



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.

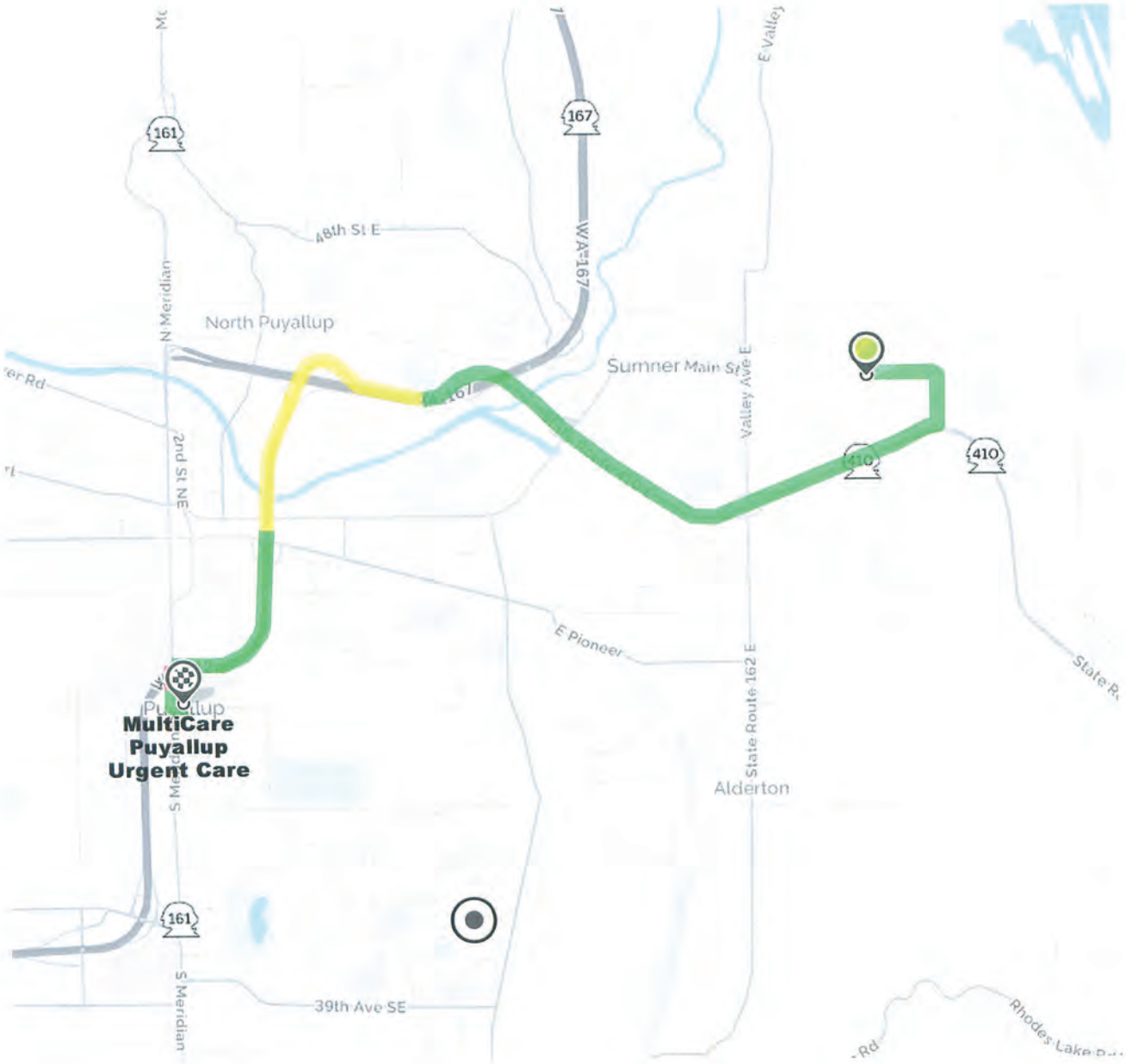
Then 0.08 miles — 6.65 total miles

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.

Use of directions and maps is subject to our Terms of Use. We don't guarantee accuracy, route conditions or usability. You assume all risk of use.



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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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

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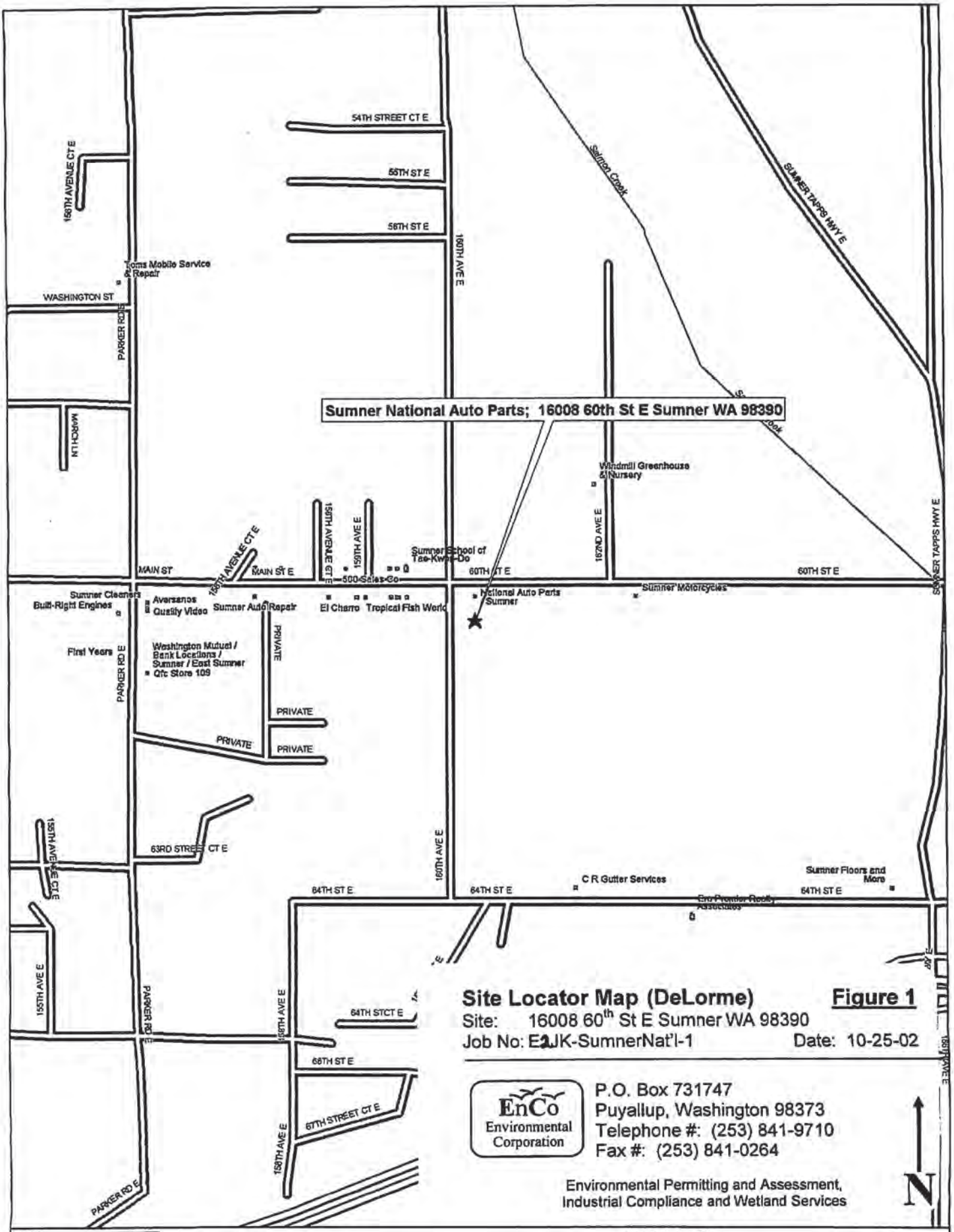
APPENDIX A

Figures

Figure 3 in file cabinet!
2.21.14



Site Locator Map (DeLorme) **Figure 1**

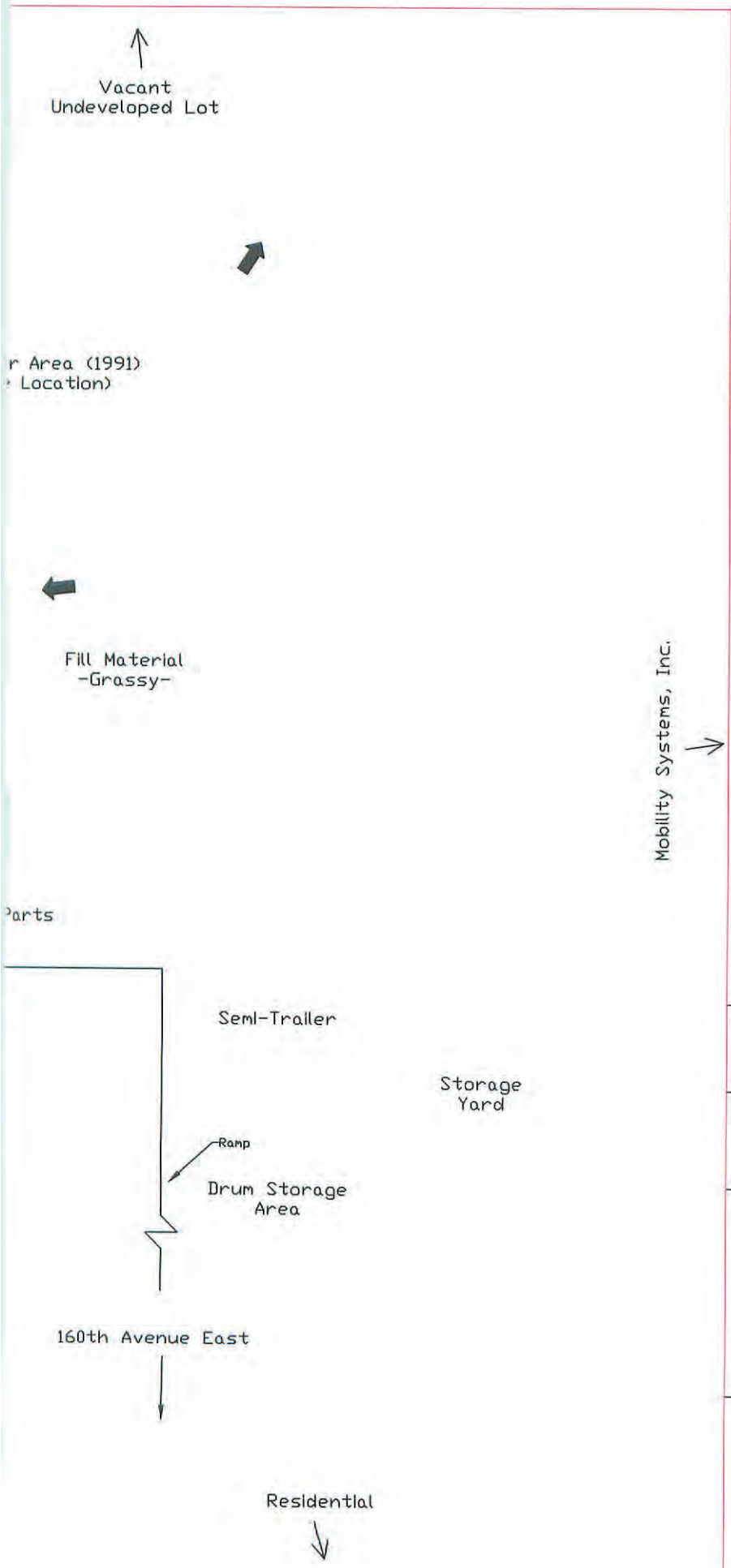
Site: 16008 60th St E Sumner WA 98390

Job No: E2JK-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



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

EnCo Environmental Corporation
POST OFFICE BOX 731747
PUYALLUP, WASHINGTON 98373
TELEPHONE #: 253.841.9710
FAX #: 253.841.0264
ENVIRONMENTAL PERMITTING AND ASSESSMENT, INDUSTRIAL COMPLIANCE, AND WETLAND SERVICES

FIGURE 2

Site Plan and Sample Location Diagram

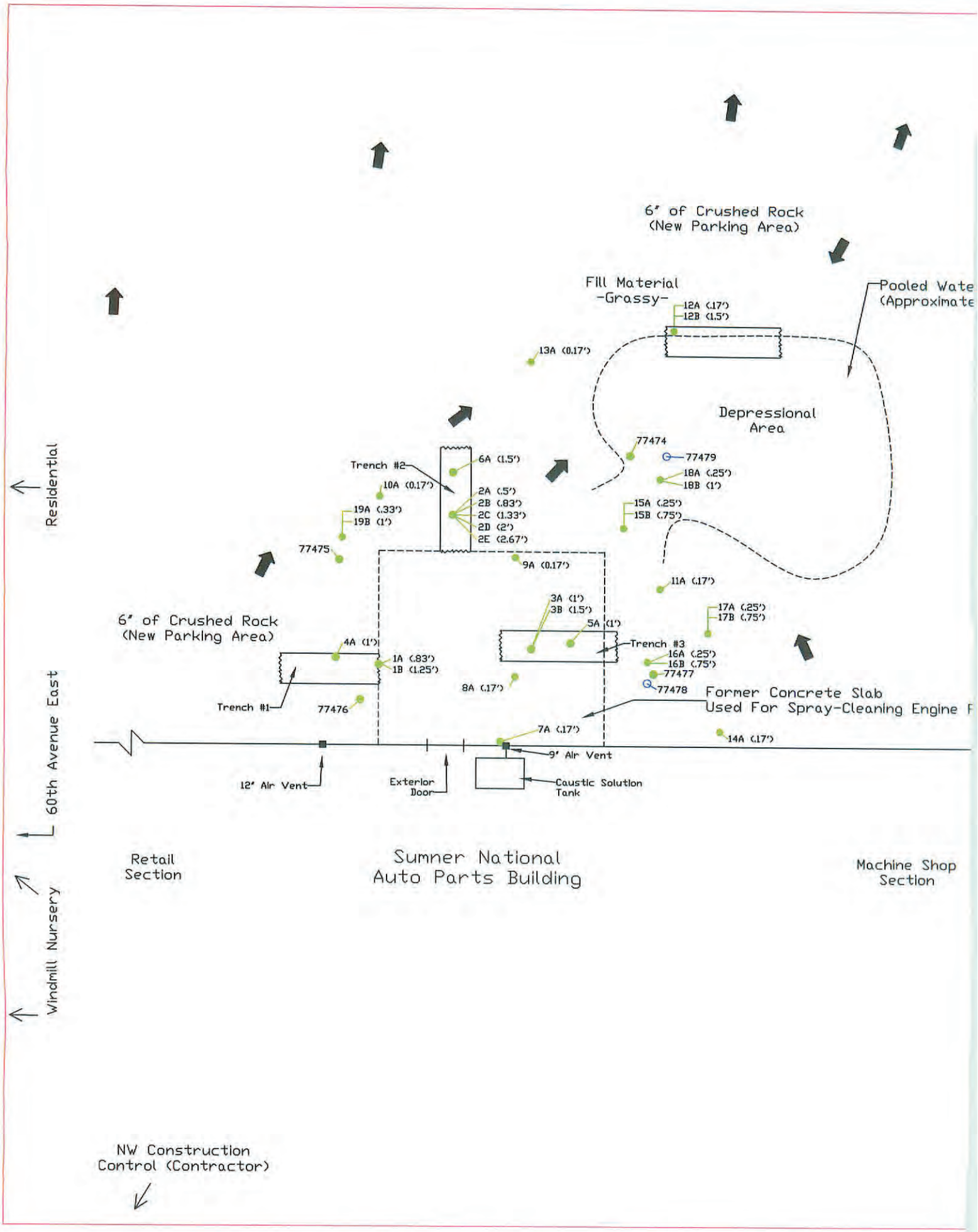
PROJECT NAME AND ADDRESS

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-
12A (.17')
12B (1.5')
Pooled Wate
(Approximate
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')
Former Concrete Slab
Used For Spray-Cleaning Engine F
Trench #1
77476
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
  (e.g. SB1 = Soil Sample Location SB1 at 10' Below Ground Surface (BGS) & 12' BGS)
- Surface Water (Collected in 2002)
- Corner Boundary of Site and Tested Area
- AC = Arsenic (Total)
- B = Benzene
- CD = Cadmium (Total)
- CR = Chromium (Total)
- HC = Heavy Metal (3)
- ND = Not Detected
- PB = Lead (Total)
- TL = Toluene

Concentration Test Material Analyte

Test Material Analyte Concentration (ug/L) is the test result with the Test Material Analyte (Arsenic, Cadmium, Chromium, Lead, Benzene, Toluene, Heavy Metal Compounds) Concentration Exceeding the Cleanup Goal (CG) for Water Quality Standard Criterion (Concentration Exceeding Cleanup Goal (CG) for Water Quality Standard Criterion).

Test Material Analyte Concentration (ug/L) is the test result with the Test Material Analyte (Arsenic, Cadmium, Chromium, Lead, Benzene, Toluene, Heavy Metal Compounds) Concentration Exceeding the Cleanup Goal (CG) for Water Quality Standard Criterion (Concentration Exceeding Cleanup Goal (CG) for Water Quality Standard Criterion).

Notes:

Map drawn by approximate scale. Dimensions and locations are approximate. Map based on Phase I Environmental Assessment and a Phase II Site Investigation Report prepared by Cornerstone Environmental Corporation. The location of underground utilities and structures are approximate and subject to verification.

Underground utilities and structures are located between 2000 BGS and 12 BGS. Underground utilities and structures located below 12' BGS are not shown.

Ground topographic relief is in the vicinity of the site.

Surface water samples are the sample results from the surface water sampled in 2002 by AERE. Surface water/pond are not shown on the map. Surface water/pond are not shown on the map.

Map does not depict subsurface utilities

SCALE 1" = 0'

FIGURE 3

Sample Locations Within Test Area Boundary

PROJECT NAME AND ADDRESS

Former Summer National Auto Parts 12000 NORTH DIXIE BLVD Clayton, OH 45315

DRAWN BY	DATE	
JAMES JOHNSON	01/01/2003	
CHECKED BY	JOB NO.	
JONATHAN W. PRUDY	2120-Summer01	

SHEET 1 OF 1

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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

EnCo Environmental Corporation

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.

EnCo Environmental Corporation

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.

EnCo Environmental Corporation

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.

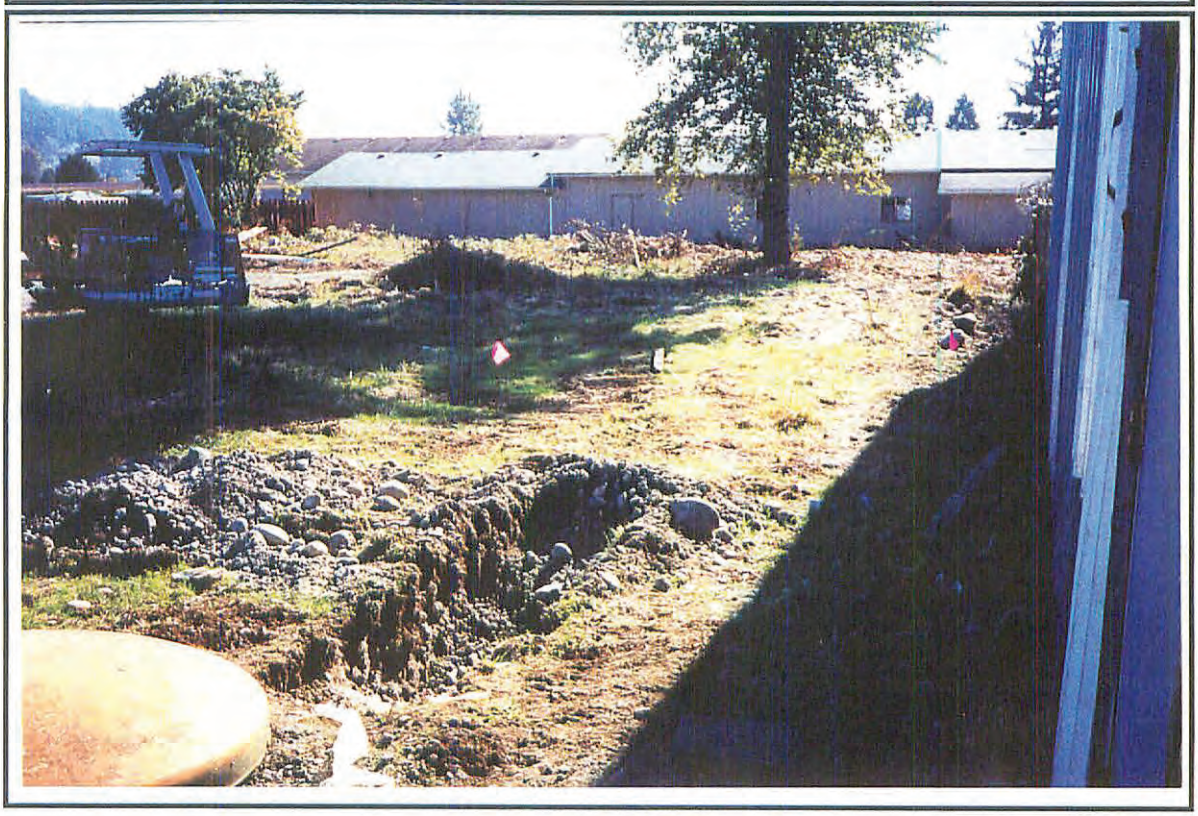

Photo #8: View of the trackhoe excavating the trenches for the purpose of inspecting subsurface soil conditions, facing west towards the Sumner National Auto Parts building. Photo taken on 10/16/02.

EnCo Environmental Corporation

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.

EnCo Environmental Corporation

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
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 3
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 3
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 3
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 3
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 3
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 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

EnCo Environmental Corporation
Environmental Assessment and Remediation Services

Phase I, II & III, Stormwater Plans & Sampling, UST Remediation, Permit Compliance and Wetland Services

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

EnCo Environmental Corporation
Environmental Assessment and Remediation Services

Phase I, II & III, Stormwater Plans & Sampling, UST Remediation, Permit Compliance and Wetland Services

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: 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-QPM~~ 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.

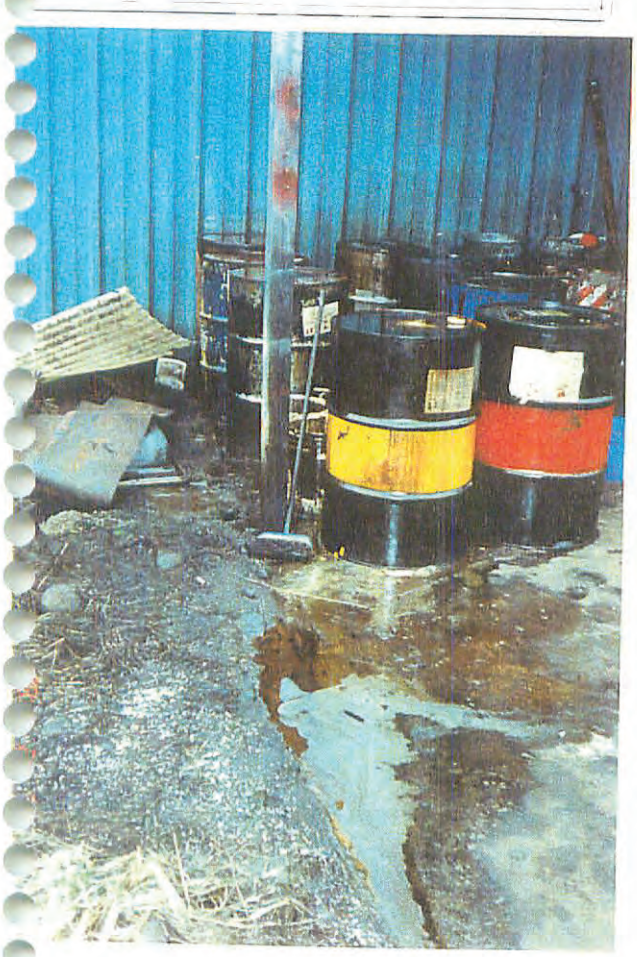
I also recommended to Mr. Suss that he find an alternative method for rinsing engines or controlling rinseate runoff, and that he determine an appropriate method for disposal of metal grinding sludge.

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
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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.	Carcino-genicity 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

HRISTINE 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

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	108%	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" 9/k	11/5/02	10
SN-2B-SO-6" 10" Dup	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		98%	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

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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) 957-9804

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 #: E2JK-Sumner Nat'l Auto-1 PROJECT MANAGER: JMK

DATE: 10-3-02 PAGE 1 OF 1
PROJECT NAME: Sumner National Auto Parts
LOCATION: Sumner, WA
COLLECTOR: Jon 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			✓					✓				✓	✓			✓						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									✓													10-5-02	1	
8. SN-3A-SO-12'	12"	2:05	Grab									✓													1	1	
9. SN-3B-SO-18"	18"	2:15	Grab									✓														[illegible]	Sum
10. SN-4A-SO-12"	12"	2:35	Grab									✓													Fin	[illegible]	
11. SN-5A-SO-12"	12"	2:25	Grab									✓													Sumner Al	1	
12. SN-6A-SO-18"	18"	2:30	Grab									✓														1	
13. SN-7A-SO-2"	2"	4:30	Grab									✓					✓									1	
14.																											
15.																											
16.																										13	
17.																											
18.																											

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	10-4-02	[signature]	10/7/02
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 Applies
Changes 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 #: E2SK-Sumner Ball-1 PROJECT MANAGER: Jim Kemp

DATE: 10-16-02 PAGE 1 OF 1

PROJECT NAME: Sumner National Air Parts

LOCATION: Sumner WA

COLLECTOR: Jim Kemp

DATE OF COLLECTION 10-16-02

Sample Number	Depth	Time	Sample Type (Soils)	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, As, Ba, Cd	pH	NOTES	Total Number of Containers	Laboratory Note Number
1. SN-6A-SO-2"	2"	11:25	Grab	4 oz Glass								X						~~[illegible]~~	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
Jim Kemp	10-17 02	[illegible]	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:

10% Digrant Applies

Turn Around Time: 5 Day - Normal

ESN NORTHWEST | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: EnCo Environmental Corporation
ADDRESS: PO Box 731747 Puyallup WA 98373
PHONE: 253-841-9710 FAX: 253-841-0264
CLIENT PROJECT #: E2JK-SumnerNat1-1 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-SO-0.25	.25'	1:50	Grab	4 oz glass			✓					✓								✓						1	
2. SN-15B-SO-0.75'	.75'	1:55	↓	↓			✓					✓								✓						1	
3. SN-16A-SO-0.25'	.25'	2:05	↓	↓			✓					✓								✓						1	
4. SN-16B-SO-0.75'	.75'	2:15	↓	↓			✓					✓								✓						1	
5. SN-17A-SO-0.25'	.25'	2:30	↓	↓								✓								✓						1	
6. SN-17B-SO-0.75'	.75'	2:40	↓	↓								✓								✓						1	
7. SN-18A-SO-0.25'	.25'	2:50	↓	↓								✓								✓						1	
8. SN-18B-SO-1'	1.0'	3:00	↓	↓								✓								✓						1	
9. SN-19A-SO-0.33'	0.33'	3:10	↓	↓								✓								✓						1	
10. SN-19B-SO-1.0'	1.0'	3:30	↓	↓								✓								✓						1	
11.																											
12.																											
13.																											
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15.																											
16.																											
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18.																											

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	11-18-02 9:00 A.M.	McDelivery [signature]	11-18-02
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

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

SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

Assessor-Treasurer

Parcel Map for 0520198006

12/16/2015 08:49 AM

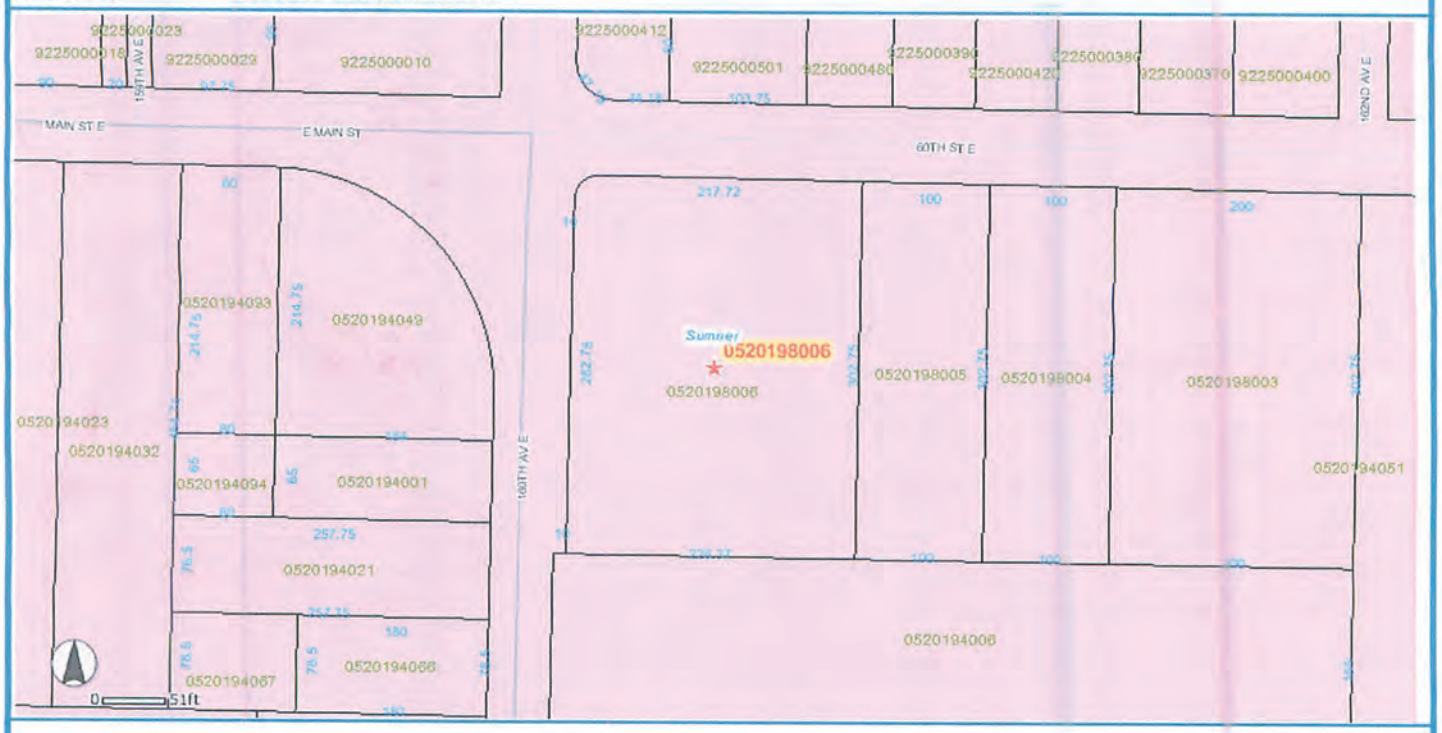
Have a question?

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)

I acknowledge and agree to the prohibitions listed in RCW 42.56.070(9) against releasing and/or using lists of individuals for commercial purposes. Neither Pierce County nor the Assessor-Treasurer warrants the accuracy, reliability or timeliness of any information in this system, and shall not be held liable for losses caused by using this information. Portions of this information may not be current or accurate. Any person or entity who relies on any information obtained from this system does so at their own risk. ***All critical information should be independently verified.***

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

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WEBSITE INFORMATION

Assessor-Treasurer

Parcel Summary 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

Appraisal Details

Value Area:	PI5
Appr Acct Type:	Commercial
Business Name:	NATIONAL AUTO AND SHOP
Last Inspection:	04/02/2008 - Physical Inspection

Assessment Details

2015 Values for 2016 Tax

Taxable Value:	891,700
Assessed Value:	891,700

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)

I acknowledge and agree to the prohibitions listed in RCW 42.56.070(9) against releasing and/or using lists of individuals for commercial purposes. Neither Pierce County nor the Assessor-Treasurer warrants the accuracy, reliability or timeliness of any information in this system, and shall not be held liable for losses caused by using this information. Portions of this information may not be current or accurate. Any person or entity who relies on any information obtained from this system does so at their own risk. ***All critical information should be independently verified.***

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WEBSITE INFORMATION

Assessor-Treasurer

Building Characteristics for 0520198006

12/16/2015 08:49 AM

Click to chat live

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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WEBSITE INFORMATION

Assessor-Treasurer

Land Characteristics for 0520198006

12/16/2015 08:49 AM

Click to chat live

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
Location:	
LEA:	2055
RTSQQ:	05-20-19-43
Amenities	
WF Type:	n/a
View Quality:	n/a
Street Type:	Paved

Taxpayer Details	
Taxpayer Name:	SUSS ROBERT A & GRACE M
Mailing Address:	16008 60TH ST E SUMNER WA 98390-3055
Size	
SF:	69,041
Acres:	1.58
Front Ft:	238
Utilities	
Electric:	Power Installed
Sewer:	Sewer/Septic Installed
Water:	Water Installed

Warning: Appraisal data provided is for informational purposes only and is incomplete for determination of value.

I acknowledge and agree to the prohibitions listed in RCW 42.56.070(9) against releasing and/or using lists of individuals for commercial purposes. Neither Pierce County nor the Assessor-Treasurer warrants the accuracy, reliability or timeliness of any information in this system, and shall not be held liable for losses caused by using this information. Portions of this information may not be current or accurate. Any person or entity who relies on any information obtained from this system does so at their own risk. ***All critical information should be independently verified.***

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WEBSITE INFORMATION

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

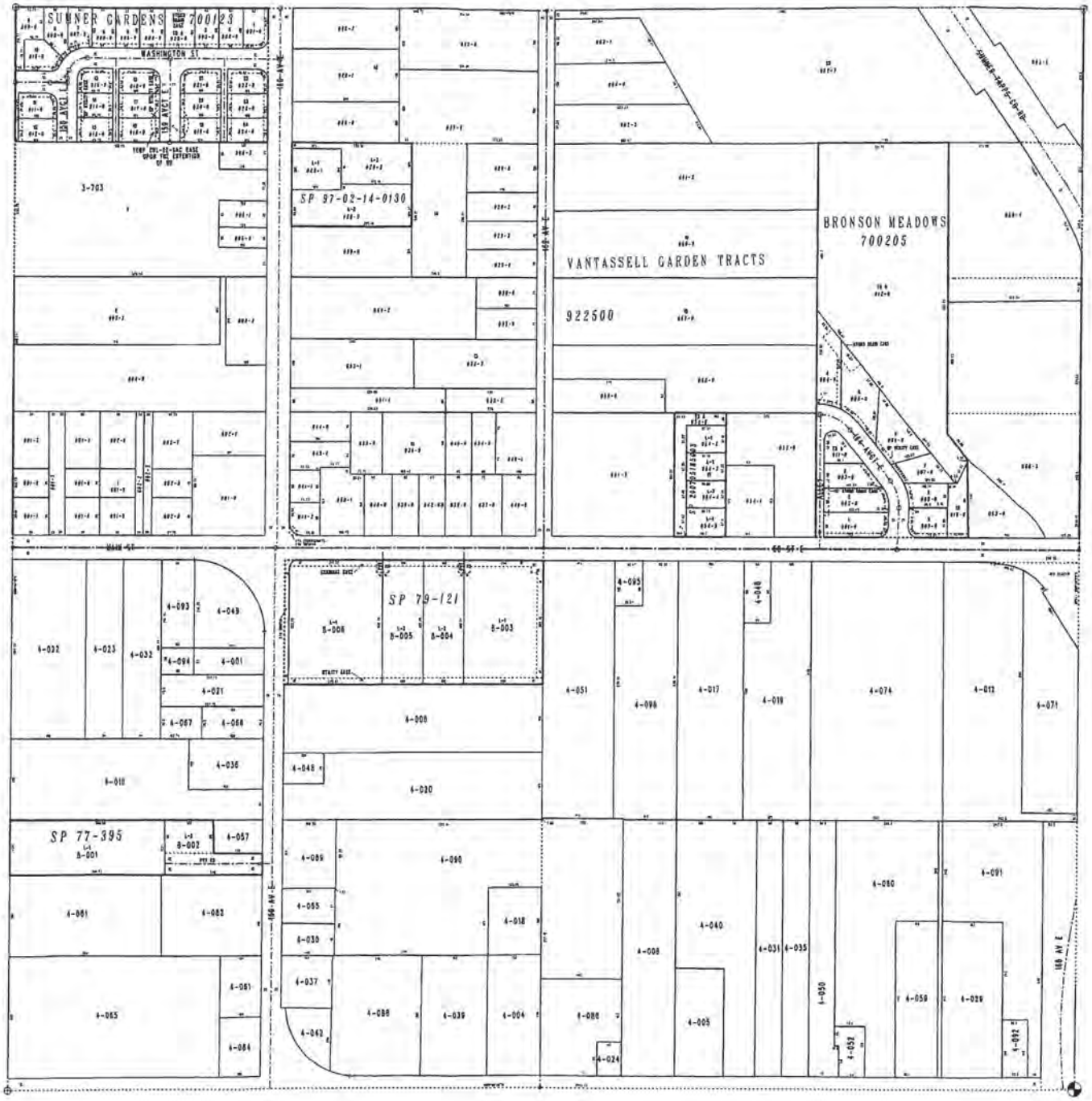
Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. **ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'**. The County makes no warranty of fitness for a particular purpose. 2015/12/16

0520198006

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

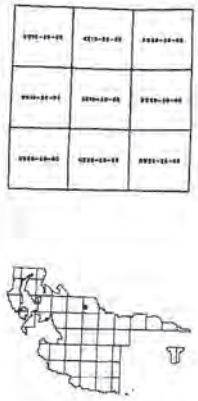
Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. **ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'**. The County makes no warranty of fitness for a particular purpose. 2015/12/16



SE19-T20N-R05E

Scale 1" = 100'

NORTH



DATE OF MAP PRODUCTION: 08/10/10

Public Services Building
2401 S. 35th Street, Room 142
Tacoma, Washington 98409

Pierce County
Assessor-Treasurer

THIS IS NOT A SURVEY

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 CUSTODY

ME 10/30/15 BI2/VS1

Page # 1 of 1 Soil

Send Report To Jonathan M. Kemp

Company EnCo Environmental Corporation

Address P.O. Box 1212

City, State, ZIP Puyallup WA 98371

Phone # 253.841.9710 Fax # jkemp@encoeo.com

SAMPLERS (signature) Jonathan M Kemp

PROJECT NAME/NO. E2JK Summer Auto Parts - 2 Summer 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

ANALYSES REQUESTED

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	Notes
SNA-1A-SO-0.75'	01	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	~~8~~ 1 qt						✓					✓		X	
SNA-2A-SO-.5'-.75'	05		12:25	Soil	~~8~~ 1 qt						✓							X	
SNA-3A-SO-.50'-.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: Jonathan M Kemp	Jonathan M Kemp	EnCo 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]	FEB	10/30	5:08 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.

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 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 (V1/AI3) water

Send Report To Jonathan McKemp

Company Ene Environmental Corp

Address PO Box 1212

City, State, ZIP Puyallup WA 98374

Phone # 253 841-9710 Fax # jkemp@enovec.com

SAMPLERS (signature) [signature]

PROJECT NAME/NO. E Sumner Natural Auto Parts

PO# E2 Jr Sumner Auto Parts-2

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-FRO)	TPH-Gasoline (GRD)	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total As, Cd, Cr, Pb	Filtered In Field 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					
				Total	10 Bottles													

Samples received at 4 °C

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by	[signature]	Jonathan McKemp	Ene Environ Corp	10-30-15	3:30 pm
Received by:	[signature]	S Smith	Fed Ex SDC	10/30/15	3:26 pm
Relinquished by:	[signature]	S Smith	Fed Ex SDC	10/30/15	5:03 pm
Received by:	[signature]	[signature]	FOB	10/30/15	5:03 pm

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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.

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

ME 12-02-15

BT3

Page # 1 of 2

Send Report To Enk Environmental Corp
Company Jonathan M. Kemp
Address PO Box 1212
City, State, ZIP Puyallup WA 98371
Phone # 253.841.9710 Fax # Email jkemp@encvec.com

SAMPLERS (signature) Jonathan M. Kemp
PROJECT NAME/NO. EZ Jr - Summer 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							↓						

Samples received at 0 °C

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	Enk Env. Corp	12-2-15	11:00
Received by:	[illegible]	Rick Vanzanick	Febex	12-2-15	11:00
Relinquished by:					
Received by:	Elizabeth Radford	Elizabeth Radford	F&B	12/2	13:30

512044

SAMPLE CHAIN OF CUSTODY

ME 12-02-15

BI3

Page # 2 of 2

Send Report To Jonathan M. Kemp

Company Enlo Environmental Corp

Address Pebey 1212

City, State, ZIP Puyallup WA 98371

Phone # 253.841-9710 ~~Fax~~ am # jkemp@enaec.com

SAMPLERS (signature) Jonathan M. Kemp

PROJECT NAME/NO. E2 Sbr-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 7017	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Cd, Cd	PH					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:	Jonathan M. Kemp	Jonathan M. Kemp	Enlo Env Corp	12-2-15	11:08
Received by:	[signature]	Rick Vangeon	Pebey	~~12-2-15~~	~~11:08~~
Relinquished by:					
Received by:	Elizabeth Rafford	Elizabeth Rafford	F&B	12/2	13:30

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.

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 BI2/VS1

Page # 1 of 1 Soil

Send Report To Jonathan M. Kemp
Company EnCo 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. E2JK Summer Auto Parts - 2 Summer 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	10.30.15	10:00	Soil	6	✓	✓					✓	✓	✓	✓	✓		X		* - per JK
SNA-1B-SU-2'	02		10:20	Soil	6	✓	✓				✓					✓		X		12/12/15 MK.
SNA-1C-SU-4'-5'	03		10:45	Soil	6	✓	✓				✓					✓		X		
SNA-1D-SU-9'-10'	04		12:10	Soil	1						✓					✓		X		
SNA-2A-SU-.5'-.75'	05		12:25	Soil	1						✓							X		
SNA-3A-SU-.50'-.75'	06		12:40	Soil	1						✓							X	*	
SNA-4A-SU-.50'-.75'	07		12:50	Soil	1						✓							X	*	
					22 Total															

Samples received at 4

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Jonathan M Kemp	Jonathan M. Kemp	EnCo 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]	FCB	10/30	5:08 pm

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

512044

SAMPLE CHAIN OF CUSTODY ME 12-02-15

BI3

Page # 1 of 2

Send Report To Enco Environmental Corp

Company Jonathan M. Kemp

Address PO Box 1212

City, State, ZIP Puyallup WA 98371

Phone # 253.841.9710 Email Fax # jkemp@enovec.com

SAMPLERS (signature) Jonathan M. Kemp

PROJECT NAME/NO. EZ JK-Summer 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	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							X						w. % Moisture
SNA-SO-7A-0.5'	03		1:00		1							X						
SNA-SO-8A-0.9'	04		1:10		1							X						
SNA-SO-9A-0.5'	05		1:20		1							X		*				
SNA-SO-10A-0.7'	06		1:25		1	X						X	X					
SNA-SO-11A-0.7'	07		1:40		1	X						X	X					
SNA-SO-12A-0.8'	08		1:55		1							X	X	*				
SNA-SO-13A-0.8'	09	↓	2:05	↓	1							X	X	*				
SNA-SO-14A-0.50'	10	12.1.15	2:20	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:	Jonathan M. Kemp	Jonathan M. Kemp	Enco Env. Corp	12-2-15	11:08
Received by:	[signature]	Rick Varsnick	Febex	12-2-15	11:06
Relinquished by:					
Received by:	Elizabeth Radford	Elizabeth Radford	F&B	12/2	13:30

FORMS\COC\COC.DOC

512044

SAMPLE CHAIN OF CUSTODY

ME 12-02-15

BI3

Page # 2 of 2

Send Report To Jonathan McKemp

Company Enlo Environmental Corp

Address Pebey 1212

City, State, ZIP Puyallup WA 98371

Phone # 253.841-9710 ~~Fax~~ am # jkemp@enaec.com

SAMPLERS (signature) Jonathan McKemp

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 (ug)	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:	Jonathan McKemp	Jonathan McKemp	Enlo Env Corp	12-2-15	11:08
Received by:	[signature]	Rick Vanguin	Pebey	~~12-2-15~~	11:08
Relinquished by:					
Received by:	Elizabeth Rafford	Elizabeth Rafford	F&B	12/2	13:30

FORMS\COC\COC.DOC

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

July 12, 2017

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

Re: Further Action at the following Site:

- **Site Name:** Sumner National Auto Parts
- **Site Address:** 16008 60th Street East, Sumner, Pierce County, WA 98390
- **Facility/Site No.:** 1304
- **Cleanup Site No.:** 3653
- **VCP Project No.:** SW1547

Dear Mr. Suss:

The Washington State Department of Ecology (Ecology) received your request for an opinion regarding a proposed remedial action as part of your independent cleanup of Sumner National Auto Parts (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below. **Enclosure A** includes pertinent figures from the work plan for the Site, as currently known to Ecology (Figures 1 through 4).

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Email correspondence from Mr. Tim Mullin, Ecology, to Mr. Jonathan Kemp, Environmental Corporation (EnCo), dated June 27, 2017.

2. EnCo, *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017.

3. Ecology, RE: State Environmental Policy Act Comments, dated April 3, 2017.

4. Email correspondence from Mr. Tim Mullin, Ecology, to Mr. Jonathan Kemp, EnCo, dated January 27, 2017.

The above documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

This opinion letter provides comments Enco's *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017. Excavation of contaminated soils and installation of six additional monitoring wells is proposed. A Site description and selected figures (1-4) are included in **Enclosure A.**

Comments:

1. Overall, Ecology concurs with the remedial action proposed and the feasibility study. The goals of the remedial action are to delineate the extent of contamination, characterize the Site, and to achieve cleanup levels at the Site for Site COCs via excavation.

Ecology concurs that excavation is the remedial action with the highest probability of contamination removal and meeting the proposed MTCA Method A and Method B cleanup levels. Standard points of compliance for achieving those cleanup levels in soil and groundwater are anticipated to be used for the Site.

2. Field work for the proposed excavation and well installation was authorized via email from Ecology to EnCo on June 27, 2017. That communication is included in **Enclosure B**. Ecology concurred with the work plan and provided selected comments in advance of this opinion letter because the work is time sensitive. In order to avoid a potentially high groundwater table, excavation work must occur between July and September. In Ecology's estimate, the opinion letter would not be submitted until potentially too late to accommodate this window of opportunity, and thus provided the advance email notification to proceed after initial review of the *Independent Remedial Cleanup Action Work Plan*.

3. Ecology concurs that implementation of the remedial action outlined in the work plan likely will result in areal and vertical delineation of Site soils per WAC 173-340-350(7)(c)(iii)(B), and provides acceptable contingencies in case contamination is more widely distributed than anticipated. Ecology concurs with the work plan contingencies in that additional soil may require removal and off-Property disposal depending on the laboratory analytical results. Ecology encourages the removal of soil as dictated by the laboratory results in order to cleanup Site contamination. Specifically, it is recommended to await analytical results and excavate any exceedances of MTCA Method A or Method B cleanup levels in soil encountered prior to backfilling the excavation or redistributing the gravel stockpile.

4. Where field screening or visual observations indicate contaminated soils, ethylene glycol (antifreeze) should be added to the Site contaminants of concern (COC) list.
    a. Sample for ethylene glycol where staining of Site soils indicate a potential release of antifreeze and/or where sampling of Site soils are sampled for total petroleum hydrocarbons (TPH) and/or volatile organic compounds (VOCs). Ethylene glycol has a MTCA Method B cleanup value in soil for unrestricted land use of 160,000 milligrams per kilogram.
    b. Ecology recommends sampling soil stockpiles as needed for ethylene glycol as well.
    c. Groundwater should also be sampled for ethylene glycol. The MTCA Method B cleanup value for ethylene glycol in groundwater is 16,000 µg/L.

5. In order to maximize excavation efficiency, avoid a potentially high water table, and minimize the risk of cross-contamination of contaminated soils coming into contact with high groundwater, Ecology agrees with the decision to complete the excavation at the anticipated seasonal minimum at the Site for groundwater (July through September).

6. It appears that additional information requested by Ecology via email correspondence dated January 27, 2017 has been incorporated into the work plan. A copy of this correspondence is included in **Enclosure B**.

7. Ecology concurs with landfill disposal of contaminated Site soils at an approved facility.

8. Ecology concurs with sampling of gravels for selected COCs in order to verify that the gravel stockpile is not contaminated. These gravels were placed on the east side of the Property sometime between 2002 and 2015, after cleanup had started. If the gravel stockpile is determined to be contaminated, it should be disposed of at an approved facility.

9. Where field screening or visual observations indicate contamination is likely to be present outside of Area 9, soil sampling may need to be adjusted to a broader scope of COCs (e.g., similar to the list proposed for Area 9). If there is any question whether or not additional analytical results should be obtained at a given sample location, Ecology recommends collecting the additional data. If analytical data indicates that there may be uncertainty regarding whether or not a soil stockpile should be disposed of off-Property at an approved facility, Ecology suggests disposal of the soil stockpile at the off-Property facility.

10. Ecology notes that the appropriate local permitting applicable to the remedial action and evaluation under the State Environmental Policy Act (SEPA) appears to have been completed. Ecology provided SEPA comments to the City of Sumner in a letter dated April 3, 2017.

11. Site topography is relatively flat. Local topography gently decreases to the north and northwest, towards the nearest surface water body, Salmon Creek, which is located approximately 2,200 feet to the north. Ecology concurs with the monitoring well network as proposed, though Ecology understands field conditions or utility conflicts may cause the final well locations to be adjusted. However, should analytical results or groundwater flow direction indicate additional monitoring wells are necessary, delineate the Site per WAC 173-340-350(7)(c)(iii).

12. In October 2015 groundwater was reported at approximately 5 feet below top of casing.

Ecology concurs with the proposed installation of six additional monitoring wells. Field observations may require longer monitoring well screens than proposed. Screen lengths should be set in order to produce sufficient water volume for sampling from each well and should ideally extend slightly above the maximum water table. All monitoring wells should be properly developed. Ecology recommends using low flow groundwater sampling methodology to sample all Site monitoring wells.

13. After monitoring well installation, Ecology recommends waiting at least two weeks before sampling the monitoring wells in order to ensure a representative sample. The reasons for this is because metals are Site COCs and results may be influenced immediately after drilling by suspended particles in water within the monitoring well.

14. For metals in groundwater, Ecology recommends sampling for both total and dissolved metals.

15. On page 8 of the *Independent Remedial Cleanup Action Work Plan*, item 15, "(MW-1 to MW-6)" should be "(MW-2 to MW-7)" as monitoring well MW-1 has already been installed at the Site.

16. Where investigation derived waste is generated associated with the proposed monitoring well installation, Ecology recommends that these soils and any purge or decontamination water be disposed of off-Site at an approved facility.

17. There are good discussions of the exposure pathways in the *Independent Remedial Cleanup Action Work Plan*. In a post-cleanup comprehensive report for the Site, review and discuss each pathway. It appears the ecological pathway remains to be considered. For the comprehensive report, please ensure they are submitted under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.

18. A terrestrial ecology evaluation (TEE) must be performed as part of this cleanup. Please fill out the form on Ecology's website and submit it to us (along with any supporting documentation, as appropriate) for review. The form can be found at: https://fortress.wa.gov/ecy/publications/summarypages/ecy090300.html

19. For reference, here are links to Ecology's remedial investigation (RI), feasibility study (FS), cleanup action plan (CAP) checklists. Final reports are encouraged to use these checklists to guide report format.
    a. RI: https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html
    b. FS: https://fortress.wa.gov/ecy/publications/SummaryPages/1609007.html
    c. CAP: https://fortress.wa.gov/ecy/publications/SummaryPages/1609008.html

20. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website http://www.ecy.wa.gov/eim. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination; in addition this data be submitted concurrently with submittal of the environmental report[1].** Please be sure to submit all soil and groundwater data collected to date, as well as any future data, in this format. Be advised that Ecology requires up to four weeks to process the data once they are received.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 360-407-6265 or e-mail at Tim.Mullin@ecy.wa.gov.

Sincerely,

Tim Mullin, LG
SWRO Toxics Cleanup Program

TCM: kb

By Certified Mail: [91 7199 9991 7037 0291 6418]

Enclosures (2): A – Site Description and Selected Site Figures
B – Email Correspondence

cc: Jonathan Kemp, LG, EnCo Environmental Corp.
Nick Acklam, Ecology
Matt Alexander, Ecology

Enclosure A

Site Description and Selected Site Figures

1) Figure 1: Vicinity
2) Figure 2: Parcel & Aerial
3) Figure 3: Soil and Groundwater Test Results – Before Clean Up
4) Figure 4: Excavation Footprints & Temporary Soil Stockpile Proposed During Clean Up

Site Description

Site and Property:

The Site is located on the parcel located at 16008 60th Street East, Sumner, Pierce County, Washington. According to the Pierce County Assessor-Treasurer's website, the Site is associated with parcel 0520198006, which totals 1.58 acres in size (Property). The Property is zoned commercial. Past Property use was for rebuilding automobile engines and metal machining within the current Property building. No engine rebuilding or metal machining activities currently take place at the Property.

Property History and Current Use:

The Property is occupied by a retail automobile parts supply and sales company in a single building. The 7,500 square foot metal roof and metal frame building was constructed in 1979. A machine shop used to occupy the southern 4,500 square feet of the building, which is used for automobile parts storage today. A lean to consisting of an awning and a concrete slab used to be attached to the east side of the center portion of the building. These features were removed sometime in the mid 1990's.

Property Vicinity:

The Property is in an area of mixed residential, commercial, and agricultural properties.

Geology/Soils:

Site soils observed to date are fill covering predominantly sand with some silts and gravels.

Groundwater:

Currently, one groundwater monitoring well (MW-1) is present at the Site. Installed in October 2015, groundwater was measured at approximately 5 feet bgs. MW-1 was placed in the source area of contamination at the Site.

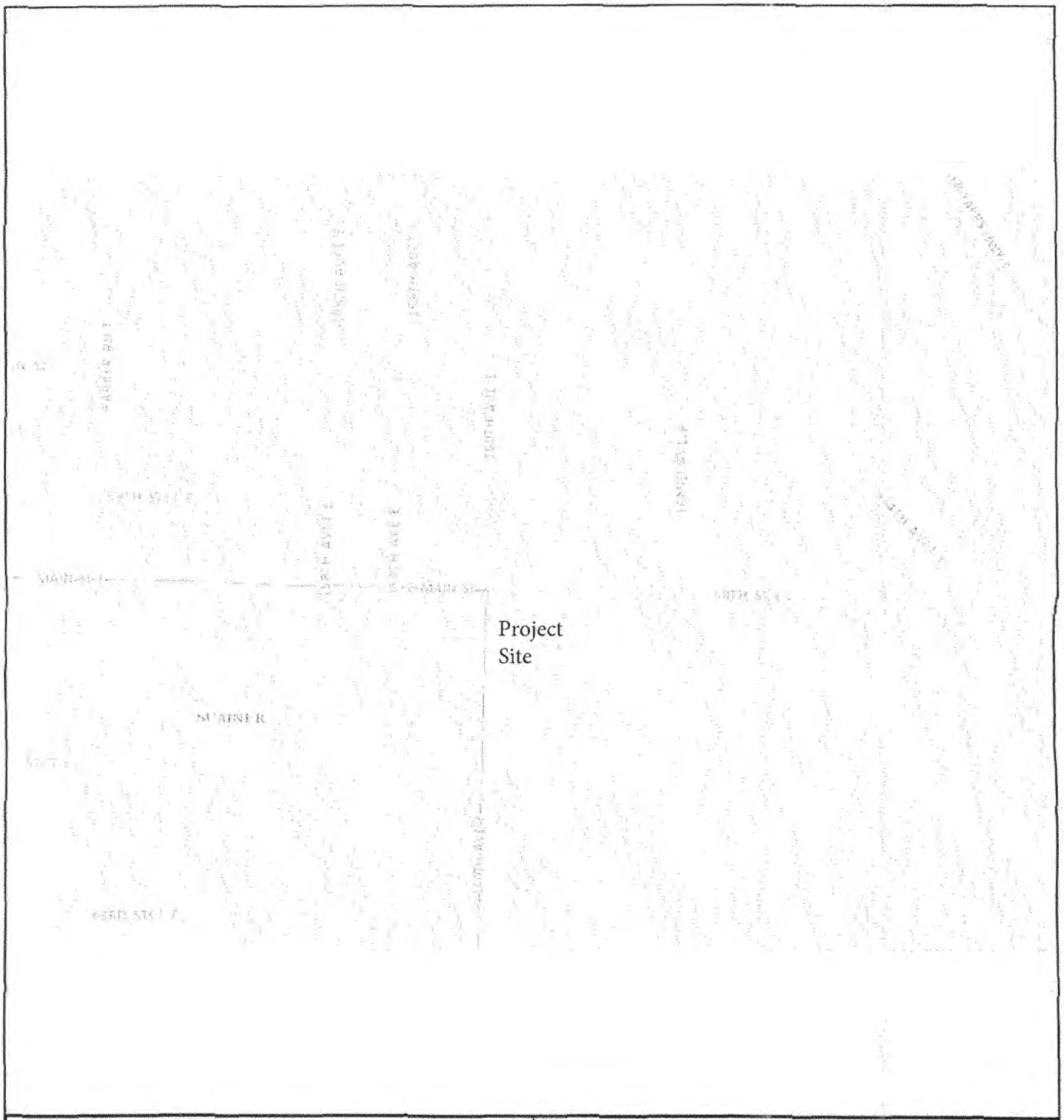
Surface/Storm Water/Septic Systems:

On-Property, a low area east of the building reportedly collected water into a pool up to 20 feet by 40 feet in size. Salmon Creek, located approximately 2,200 feet north and of the Site is the

nearest surface water. The Puyallup River is located approximately 5,100 southwest of the Site. It is unknown if a storm water system is present at the Site. The building at the Property is connected to public water and sewer. No septic system is present.

Source of Contamination & Contamination Extent:

According to EnCo's Independent Remedial Cleanup Action Work Plan, the releases were related to periodic dumping of hot caustic wash water in the soils east of the former lean-to. The former lean-to consisted of an awning over a small concrete pad (16 feet long by 18.5 feet wide) were some fluid storage and engine cleaning occurred. Automobile engines were also reportedly spray cleaned on bare soil to the east of the concrete slab. In response to anonymous complaints, Ecology identified these releases in an inspection on February 7, 1991. It is not known how long the improper disposal activities occurred at the Property; however, the current building and engine rebuild operation is believed to have started in 1979.



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

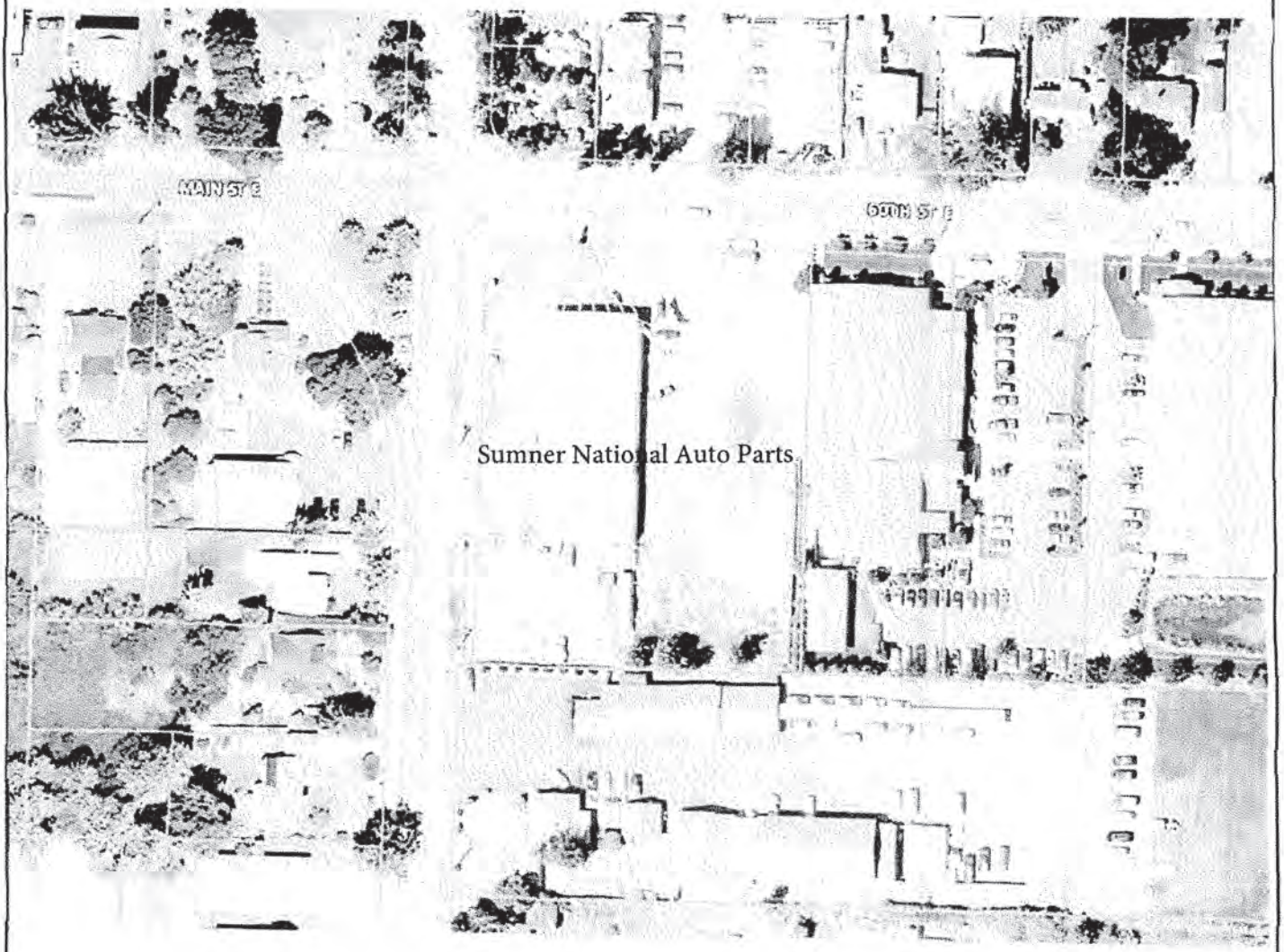
N

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

Figure 3

A PORTION OF SW¼ OF SE¼ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

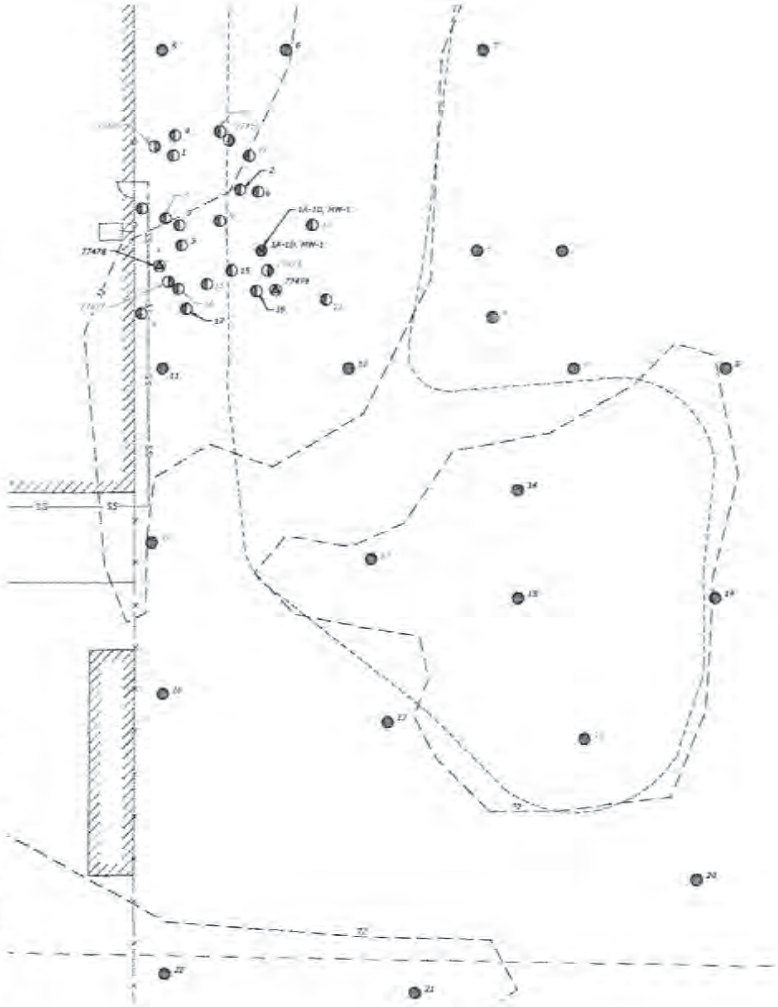
SUMNER NATIONAL AUTO PARTS STORE

16008 60TH ST E

SOIL AND GROUNDWATER TEST RESULTS - BEFORE CLEAN UP

EnCo Environmental Corporation

VICINITY MAP
N.T.S.



1991 & 2002 SAMPLE DATA

TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
77478		[illegible]
77479		[illegible]
1	1A (.25') 1B (1.25')	ND-ND; PB-ND ND-ND
2	2A (.5') 2B (.83') 2C (1.33') 2D (2') 2E (2.67')	ND-ND; PB-120 ND-ND; PB-12 ND-ND; PB-125 ND-ND ND-ND
3	3A (1') 3B (1.5')	ND-ND ND-ND
4	4A (1')	ND-ND
5	5A (1')	ND-ND
6	6A (1.2')	ND-ND
[illegible]	7A (.17')	ND-1200; CD-1.9; PB-[illegible]
[illegible]	8A (.17')	ND-ND; CD-1.2; [illegible]
[illegible]	9A (.17')	ND-ND; PB-220
[illegible]	10A (.17')	ND-1700; CD-1.3; PB-[illegible]
[illegible]	11A (.17')	ND-ND; PB-220
[illegible]	12A (.17') 12B (1.5')	ND-ND; [illegible] ND-ND
[illegible]	13A (.17')	ND-ND; CD-1.9; PB-[illegible]
[illegible]	14A (.17')	ND-ND; CD-1.5; PB-[illegible]
[illegible]	15A (.25') 15B (.75')	ND-ND; PB-110 ND-ND; PB-160
[illegible]	16A (.25') 16B (.25')	ND-290; PB-120 ND-ND; [illegible]
17	17A (.25') 17B (.75')	ND-ND; PB-220 ND-ND; PB-8
18	18A (.25') 18B (2')	ND-ND; PB-45 ND-ND; PB-47
[illegible]	19A (.25') 19B (2')	ND-ND; PB-[illegible] ND-ND; [illegible]

2015 SAMPLE DATA

TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
1	1A (.75') 1B (2') 1C (3') 1D (10')	ND-ND; CD-ND; PB-105 ND-ND; CD-ND; PB-1.2 ND-ND; CD-ND; PB-1.21 CD-ND; PB-ND
[illegible]	2A (.5')	CD-ND; PB-272
[illegible]	3A (.5')	CD-ND; PB-225
[illegible]	4A (.5')	[illegible]
5	5A (.5')	ND-ND; CD-ND; PB-112
6	6A (.5')	CD-ND; PB-33.6
7	7A (.5')	CD-ND; PB-27.4
8	8A (.5')	CD-ND; PB-6.65
[illegible]	9A (.5')	[illegible]
10	10A (.5')	ND-450; CD-ND; PB-107
11	11A (.5')	ND-ND; CD-ND; PB-88.5
[illegible]	12A (.5')	CD-ND; PB-220
[illegible]	13A (.5')	CD-ND; [illegible]
14	14A (.5')	CD-ND; PB-110
15	15A (1.0')	CD-ND; PB-25.9
16	16A (1.0')	ND-ND; CD-ND; PB-27.1
17	17A (1.0')	ND-ND; CD-ND; PB-117
[illegible]	18A (1.0')	ND-1500; CD-ND; PB-66.3
19	19A (.5')	CD-ND; PB-103
20	20A (.5')	CD-ND; PB-5.88
21	21A (.5')	CD-ND; PB-5.29
22	22A (.5')	CD-ND; PB-10.9

NOTES:
SURFACE WATER AND GROUND WATER SAMPLES CED NOT EXCEED MTCA CULE FOR THE TESTED CODE.

TEST RESULTS PLOTTED IN [illegible] TEST IN THE SAMPLE DATA COLUMN EXCEEDED MTCA METHOD A CULE.

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

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

SITE DATA

PARCEL NUMBER:	0520199006
SITE ADDRESS:	16008 60TH ST E
SITE AREA:	69,041 SF (1.58 AC)
ZONING:	GC (GENERAL COMMERCIAL)
SETBACKS:	
FRONT:	0' MIN/25' MAX
BACK:	20'
INTERIOR:	5'

PROJECT INFO

CLIENT:
ENCO ENVIRONMENTAL
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-841-8710

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

PREPARED:
BEYLER CONSULTING
1420 BROADWAY AVE W, STE 10
LAKEWOOD, WA 98499
TEL: 253-301-4157

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)

NO.	DESCRIPTION	DATE

BEYLER CONSULTING
Plan. Design. Manage

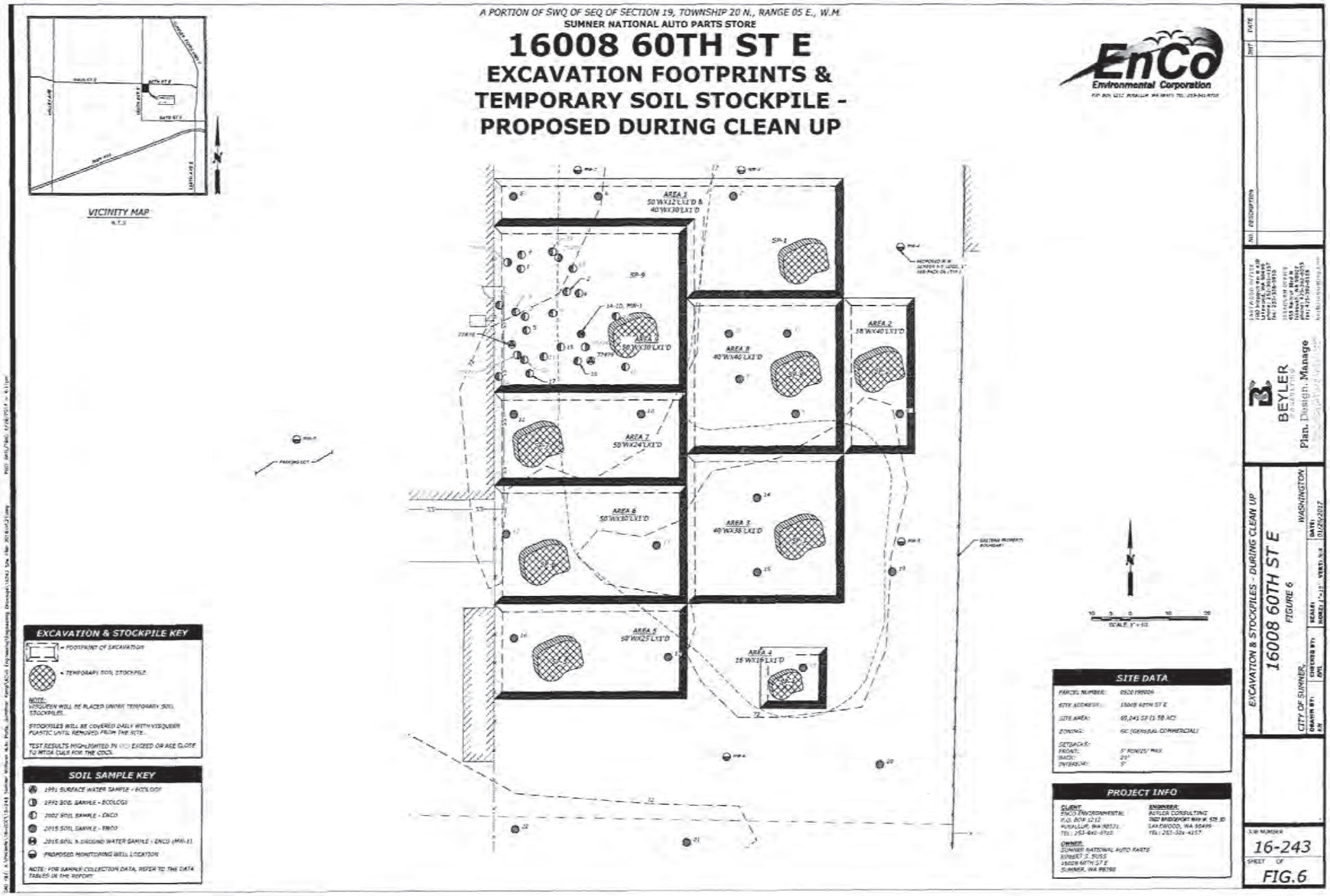
SAMPLE DATA - BEFORE CLEAN UP
16008 60TH ST E
FIGURE 5
CITY OF SUMNER, WASHINGTON

DRAWN BY: KW | CHECKED BY: DAE | SCALE: NORD 1"=10' | VERT. N/A | DATE: 08/09/2016

JOB NUMBER 16-243

SHEET OF FIG.5

Figure 4


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
EnCo
Environmental Corporation
VICINITY MAP
N.T.S.
AREA 1
50'WX12'LX1'D &
40'WX30'LX1'D
AREA 2
18'WX40'LX1'D
AREA 3
40'WX38'LX1'D
AREA 4
16'WX16'LX1'D
AREA 5
50'WX25'LX1'D
AREA 6
50'WX30'LX1'D
AREA 7
50'WX24'LX1'D
AREA 8
40'WX40'LX1'D
AREA 9
50'WX30'LX1'D
SP-1
SP-9
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 (CC) EXCEED OR ARE CLOSE TO MTCA CULS FOR THE CDCS.
SOIL SAMPLE KEY
1991 SURFACE WATER SAMPLE - ECOLOGY
1992 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: 0520199006
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: 253-840-9720
ENGINEER:
BEYLER CONSULTING
7802 BRIDGEPORT WAY W, STE 30
LAKEWOOD, WA 98499
TEL: 253-331-4257
OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390
BEYLER
Plan. Design. Manage
EXCAVATION & STOCKPILES - DURING CLEAN UP
16008 60TH ST E
FIGURE 6
CITY OF SUMNER, WASHINGTON
DRAWN BY: KN
CHECKED BY: DML
SCALE: HORZ: 1"=15' VERT: N/A
DATE: 01/26/2017
JOB NUMBER
16-243
SHEET OF
FIG.6

Enclosure B

Email Correspondence

From: Mullin, Tim (ECY)
To: "Jonathan Kemp"
Subject: RE: EnCo and Sumner National Parts Work Plan Update
Date: Tuesday, June 27, 2017 4:12:00 PM

Yes, please proceed following the work plan and addressing additional items presented in my email dated 6/27/17.

Of note, I do not anticipate any material changes to my comments based on review and finalization of the draft opinion. Additionally, I do not anticipate being present for any split sampling during the excavation (same as I indicated during the January 2017 Site visit).

Thank you,
Tim

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Tuesday, June 27, 2017 4:08 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: RE: EnCo and Sumner National Parts Work Plan Update

Hi Tim:

Thanks for the update.

Just want to be sure: So we can proceed with the cleanup so long as we follow the Work Plan that you now have along with addressing the items presented by you in today's email?

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com

EnCo Environmental Corporation

www.encoec.com
Think Green! Please do not print this e-mail unless it is completely necessary.

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Tuesday, June 27, 2017 1:40 PM
To: Jonathan Kemp
Subject: RE: EnCo and Sumner National Parts Work Plan Update

Hi Jonathan:

I am finalizing an opinion for SW1547. Given Ecology's current review cycle timelines and the potential government shutdown, there is no way this opinion would be delivered in a timely fashion to be able to target July-September for the excavation. The need for the specific excavation time frame is to ensure groundwater is at the seasonal minimum and so the potential for infiltrating groundwater won't complicate the excavation.

Based on the need for implementing the work plan during the summer months, in general, Ecology concurs with the interim remedial action work plan and feasibility study. A lot of the field work is going to rely on field screening and the judgmental sampling in order to horizontally delineate soil contamination and confirm removal of soil contamination at depth. I think the work plan has sufficient contingencies to address potential unexpected pockets of contamination.

Here are some of my thoughts. I bolded what I consider critical items. This is not a complete list from the opinion letter, but should be sufficient to implement the work plan. Please take a look at these and let me know if you have any questions.

1. Overall, Ecology concurs with the interim remedial action proposed and the feasibility study. Ecology concurs that excavation is the cleanup strategy with the highest probability of contamination removal and meeting the MTCA Method A and Method B cleanup levels proposed. Standard points of compliance for achieving those cleanup levels in soil and groundwater are anticipated to be used for the Site.

2. Ecology has the following comments. These comments may slightly alter the final version of the workplan, but should not alter any field operations. Field work for the proposed excavation and well installation can proceed upon receipt of this opinion letter.
   a. **Where field screening or visual observations indicate contaminated soils, ethylene glycol (antifreeze) should be added to the Site COC list.**
      i. **Sample for ethylene glycol where staining of Site soils indicate a potential release of antifreeze and/or where sampling of Site soils are sampled for total petroleum hydrocarbons (TPH) and/or volatile organic compounds (VOCs). Ethylene glycol has a MTCA Method B cleanup value in soil for unrestricted land use of 160,000 milligrams per kilogram.**
      ii. **Ecology recommends sampling soil stockpiles as needed for ethylene glycol as well.**
      iii. **Groundwater should also be sampled for ethylene glycol. The MTCA Method B cleanup value for ethylene glycol in groundwater is 16,000 µg/L.**

   b. Ecology concurs with the work plan contingencies in that additional soil may require removal and off-Site disposal depending on the laboratory analytical results. Ecology encourages the removal of soil as dictated by the laboratory results in order to cleanup Site contamination.

c. Ecology agrees with the decision to complete the excavation at the anticipated seasonal minimum at the Site for groundwater (July-September).

d. It appears that additional information requested by Ecology via email correspondence dated January 27, 2017 has been incorporated into the work plan. A copy of this correspondence is included as Enclosure B.

e. Ecology concurs with landfill disposal of contaminated Site soils.

f. Ecology concurs with sampling of gravels placed on Site after cleanup at the Site had started for selected COCs in order to verify that the gravel stockpile is not contaminated.

g. **Where field screening or visual observations indicate contamination is likely to be present outside of Area 9, soil sampling may need to be adjusted to a broader scope of COCs (e.g., similar to the list proposed for Area 9). If there is any question whether or not additional analytical results should be obtained at a given sample location, Ecology recommends collecting the additional data.**

h. Ecology notes that the appropriate local permitting applicable to the interim remedial action and evaluation under the State Environmental Policy Act (SEPA) appears to have been completed.

i. Ecology concurs that implementation of the remedial action outlined in the work plan will likely result in aeral and vertical delineation of Site soils per WAC 173-340-350(7)(iii)(C), and provide acceptable contingencies in case contamination is more widely distributed than anticipated.

j. Site topography is relatively flat. Local topography gently decreases to the north and northwest, towards the nearest surface water body, Salmon Creek, located approximately 2,200 feet to the north. Ecology concurs with the monitoring well network as proposed. However, should analytical results or groundwater flow direction indicate additional monitoring wells are necessary, delineate the Site per WAC 173-340-350(7)(iii)(C).

k. **After monitoring well installation, Ecology recommends waiting at least two weeks before sampling the monitoring wells in order to ensure a representative sample. The reasons for this is because metals are a Site contaminant of concern (COC) and results may be influenced by suspended particles in the water column within the well after drilling.**

i. Ecology recommends using low flow groundwater sampling methodology.

ii. For metals in groundwater, Ecology recommends sampling for both total and dissolved metals.

l. Ecology understands that final monitoring well locations may be adjusted depending upon utility conflicts.

m. Ecology concurs with the proposals for local surveying of soil sample locations and professional surveying of the monitoring well locations.

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Tuesday, June 27, 2017 12:53 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: EnCo and Sumner National Parts Work Plan Update

Good Day Tim:

Update please on the Sumner National Auto Parts Work Plan review.

We are wanting to wrap up the Work Plan so that I can start getting my contractor scheduled in for July or August of this summer.

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com

EnCo Environmental Corporation

www.encoec.com
Think Green! Please do not print this e-mail unless it is completely necessary.

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Friday, June 16, 2017 9:54 AM
To: Jonathan Kemp
Subject: RE: EnCo and Sumner National Parts

Hi Jonathan:

For SW1547 interim action work plan review, I currently plan to review the report and draft work plan comments towards the end of next week.

Thanks,
Tim

From:	Mullin, Tim (ECY)
To:	Jonathan Kemp
Subject:	RE: EnCo and Sumner National Parts
Date:	Friday, January 27, 2017 9:01:00 AM
Attachments:	SW1547 WP text.docx SW1547 - metals.xlsx

Hi Jonathan:

Please see attached for my recommendations regarding the COCs and work plan text for VCP Site #SW1547, 16008 60th Street East, Sumner, WA. I have provided my recommendations for the work plan text as well as the COC list for soil and groundwater.

My thinking is that there is useful historical soil data, but I think it is important to analyze soil and groundwater for historical analytes in order to demonstrate protection of human health and the environment at the excavation extent. COCs vary from area to area, and a lot will have to be determined by field screening.

Final COCs on a per monitoring well list cannot be completely known at this time, as much depends on the excavation results, and only one groundwater sampling event has been completed at the Site. Establishing final cleanup levels for the Site also are dependent upon the excavation results, though MTCA Method A or B cleanup levels are used to determine the extent of excavation.

I agree that groundwater sampling should start with the full COC list at MW-1, and then develop a target COC list for the other monitoring wells. Hopefully the October 2015 event results are consistent going forward. Though even non detect constituents at MW-1 should be sampled at the downgradient well as a point of compliance to show that these concentrations are not going offsite. Sampling of the downgradient well would not be required until after a determination of which is the Site downgradient monitoring well.

Other thoughts I have regarding the work plan:

- Did (or will) the City of Sumner require (or complete) a SEPA determination for the excavation as part of the grading permit?
- If the gravel apron is set aside prior to excavation, I recommend removing the shallowest estimate of emplaced thickness (~4"), and sampling the gravel pile for Site COCs in soil to demonstrate it is uncontaminated. However, if the gravel pile is incorporated into the stockpiles and sampling program shown on Figure 6, then no additional sampling is recommended.
- Based on the historical sampling data, I anticipate stockpiles for areas/cells 6, 7, 8, and 9, will require off-Site transport and disposal.
- The total cubic yards of excavation and disposal may exceed the original estimate, though it appears in the work plan this contingency is anticipated.
- The final monitoring well locations will be dependent upon excavation results, as well as resolution of infrastructural and utility conflicts.
- To the extent possible, I think it is important that the excavation report for the Site address

the RI/FS/CAP components of the cleanup process under MTCA, though this does not need to be addressed as part of the work plan.

Please give me a call if you have any questions.

Thank you,
Tim

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
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Mullin, Tim (ECY)
Sent: Wednesday, January 25, 2017 9:54 AM
To: 'Jonathan Kemp' <jkemp@encoec.com>
Subject: RE: EnCo and Sumner National Parts

Thanks for the below; I have the COC review scheduled for tomorrow, 1/26/17

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Monday, January 23, 2017 2:12 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: RE: EnCo and Sumner National Parts

Hi Tim:

RE: Ecology VCP Work Plan Review
Sumner National Auto Parts
16008 60th Street East, Sumner WA 98390
Ecology VCP ID: SW1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304

Thanks for the update Tim.

I have incorporated the addition of 6 more groundwater monitoring wells into the forthcoming Work

Plan, at your request.

Regarding the Method B CULs for constituents that do not have Method A CULs:

Based on the 1991 Site Hazard Assessment rating I was able to find the following contaminants on the *"List of Substances to be considered for scaling"* on the Worksheet pages 1 through 6:

Arsenic
Barium
Chromium
Cadmium
Lead
PCE
Xylenes

Question 1: Could you please give me the specific list of metals that Ecology will require to be tested on selected soil and groundwater samples. I want to be sure we get this correct the first time.

Question 2: Listed below is my first attempt at presenting the COCs for the project site: Please review this paragraph and make needed changes or clarifications:

"The chemical or contaminant compounds or elements of concern listed below are collectively referred herein as the COCs. One or more of these COCs will be tested on the collected samples; depending on the test results obtained during the cleanup action. At a minimum, the full suite of the below-listed COCs will be analyzed on two (2) soil samples that report the highest concentrations of lead, cadmium, and petroleum hydrocarbons (project site indicators).

The full suite of the below-listed COCs for groundwater will be analyzed at **MW-1**. Based on the laboratory test result collected from **MW-1**, additional COCs may be added to the testing list for the other monitoring wells.

- Diesel range organics (DRO) as total petroleum hydrocarbons (soil & groundwater)
- Gasoline range organics (GRO) total petroleum hydrocarbons (soil & groundwater)
- Oil range organics (ORO) as total petroleum hydrocarbons (soil & groundwater)
- Volatile organic compounds (VOC) to include acetone, benzene, 2-butanone, carbon disulfide, ethylbenzene, methylene chloride, 4-methyl-2pentanone, tetrachloroethene, toluene, EDB, EDC, MTBE, total xylenes, n-hexane, and other halogenated hydrocarbons (soil & groundwater)
- Polyaromatic hydrocarbons (carcinogenic) – (soil & groundwater)
- Naphthalenes (soil & groundwater)
- Polychlorinated biphenyls (PCBs) mixtures (total) (soil)
- Total arsenic, barium, cadmium, tri-valent chromium, hexa-valent chromium, lead (soil & groundwater)
- Dissolved (filtered) arsenic, barium, cadmium, tri-valent chromium, hexa-valent chromium, and

lead (groundwater)"

Jonathan Kemp, Principal

EnCo Environmental Corporation

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Monday, January 23, 2017 7:49 AM
To: Jonathan Kemp
Subject: RE: EnCo and Well Map

Good morning Jonathan:

Please see the attached proposed approximate location sketch for the monitoring wells. The proposed monitoring well network presumes all soil contamination will be removed by excavation and that the results at MW-1 showing no exceedances of cleanup levels for groundwater continue. The monitoring well network also presumes that groundwater flow direction will be to the north, following topography and towards the nearest surface water. Exceedance of a cleanup level in groundwater at any monitoring well during future groundwater sampling may require delineation via installation of additional monitoring wells.

Monitoring wells are proposed to be installed outside the excavation perimeter after the excavation is complete. Based on the results of compliant groundwater monitoring thus far at MW-1, well construction can be similar to this one. However, if field conditions indicate that a given well location should be deeper than MW-1, have a 10 foot screen instead of a five foot screen, or be installed with a 2" (or greater) diameter casing, those options are available. Well installation should continue to be installed per WAC 173-160.

Regarding the Method B cleanup levels – these should be applied to any contaminant of concern which does not have a Method A cleanup level. Barium in soil is an example of where a Method B cleanup level should be used, but there are others (e.g., silver). Method B cleanup levels can be calculated under MTCA on a site-specific basis, however, standard assumptions can be made and the Method B cleanup levels from the CLARC database tables can be used. From my experience, I suggest using the most stringent Method B value from the CLARC database table instead of calculating a site-specific value, as the difference in values will frequently be negligible and using the database value is quicker and cheaper.

Here is a link to the CLARC database values:
https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx

Thank you,
Tim

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
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Wednesday, January 18, 2017 9:28 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: EnCo and Well Map

Hi Tim:

RE: Ecology VCP Work Plan Review
Sumner National Auto Parts
16008 60th Street East, Sumner WA 98390
Ecology VCP ID: SW1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304

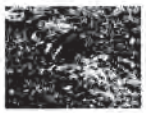
I have made all of the corrections, additions, updates to the Cleanup Action Plan that we talked about during your site visit on January 9, 2017. Once I get the following clarifications I will proceed to finish up the Cleanup Action Plan and get it to you for review.

1. Number of Monitoring Wells needed and the Approximate Location Sketch for the wells
2. Confirm that the MTCA Method "B" CULs will be used only for Barium.

Note: I am not too familiar with calculating the Method B CULs so if you could provide me with the CUL calculations needed for Barium in soil that would be a great help.

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com



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APPENDIX B

BORING LOGS

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 Classificatio	Color	Moisture	Sample Depth (bgs)
1A	0.2	Grab		30"	ML		Moist	0.75'
1B	0.1	Grab		30"	GP		Moist	1'-2'
1C	0.1	Grab		40"	SW		Smear	4'-5'
1D	0.1	Grab		40"	SW		Wet	9'-10'

Soil Layer (feet): 0 Feet, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Lithographic Description

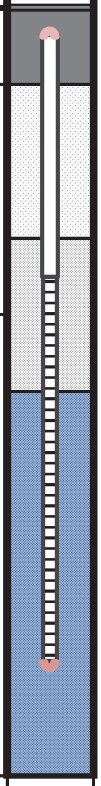
Soil at surface, grey inorganic silt loam with cobbles & crush rock, medium dense, moist, no odor, Fill

Grey brown, poorly graded, sandy gravel, 1.5" - 0.25", irregular and round, medium dense, moist, no odor, Fill

Grey, well sorted, medium sand, loose, very moist to wet, no odor

Bottom of Probe Hole

Monitoring Well Details



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

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

Galloway Environmental, Inc.

Log of Monitoring Well: MW-2

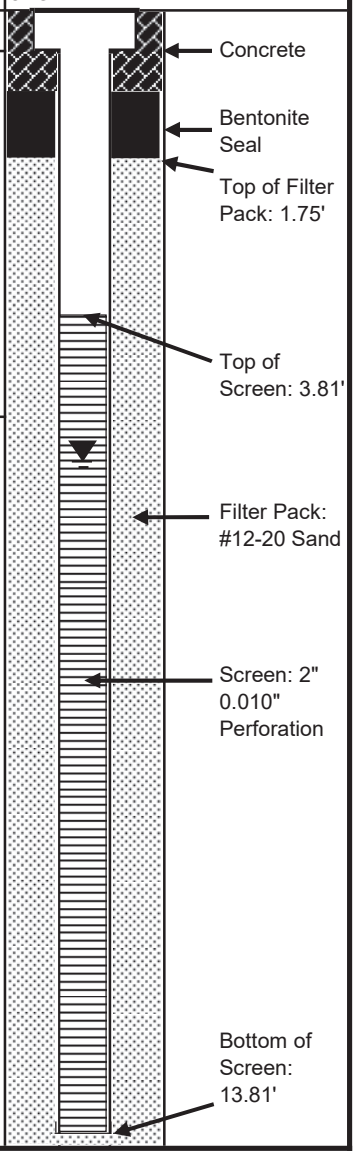
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/13/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 81ºF, mild winds	Started: 8:00 AM	Completed: 9:30 AM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 1" ASPHALT
					1" - 5' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5		MW-2@5	0.0		5' - 14' WELL-GRADED SILTY SAND (SW), 10YR 6/1 (gray), loose small to medium fines and gravel, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-2
Casing Top Elev: 76.1
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

Galloway Environmental, Inc.

Log of Monitoring Well: MW-3

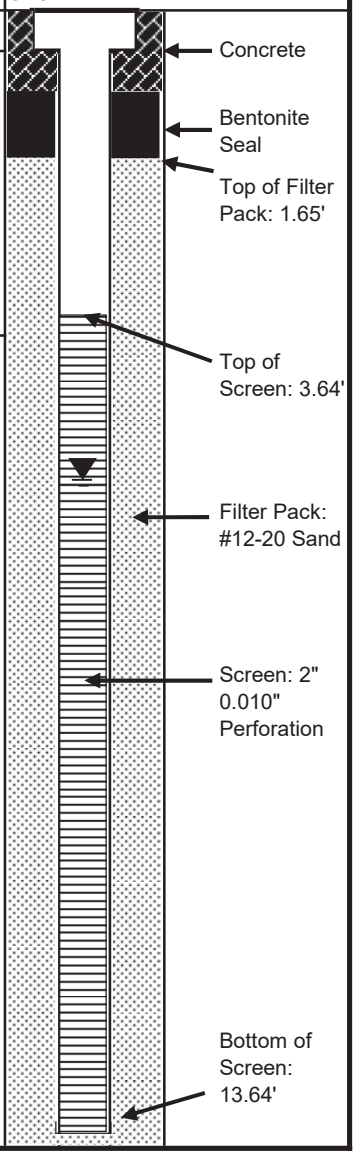
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/13/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 81ºF, mild winds	Started: 9:30 AM	Completed: 11:00 AM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 2" GRAVEL
					2" - 4' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5		MW-3@4.5	0		4' - 14' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-3
Casing Top Elev: 76.6
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

Galloway Environmental, Inc.

Log of Monitoring Well: MW-4

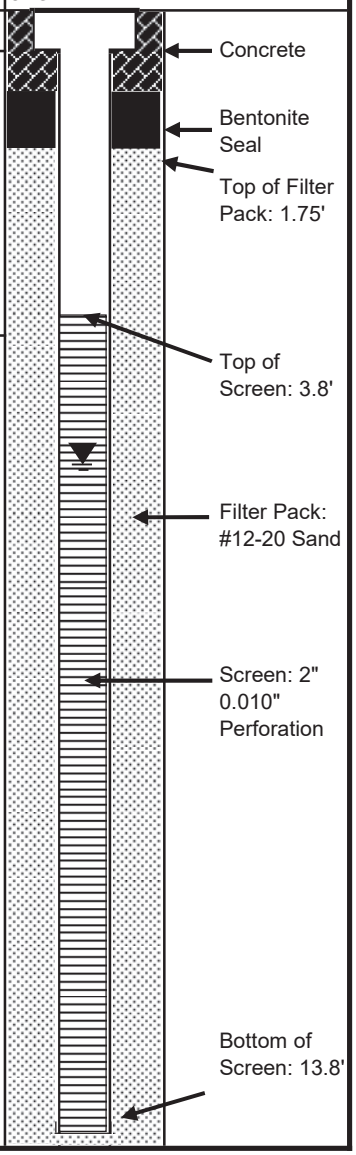
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/13/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 83ºF, mild winds	Started: 11:30 AM	Completed: 12:30 PM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 2" GRAVEL
					2" - 4' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5	Grab	MW-4@4.5	0		4' - 14' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-4
Casing Top Elev: 76.4
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

Galloway Environmental, Inc.

Log of Monitoring Well: MW-5

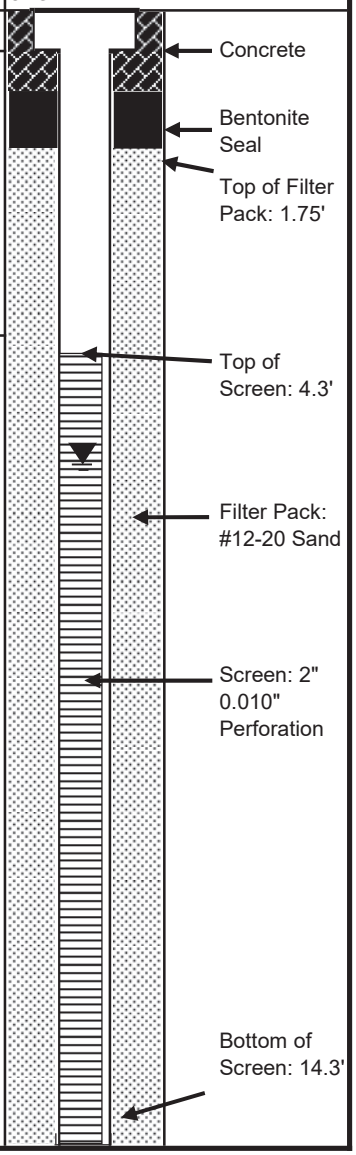
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/14/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 75ºF, mild winds	Started: 8:30 AM	Completed: 9:30 AM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 2" GRAVEL
					2" - 4' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5	Grab	MW-5@4.5	0		4' - 14' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-5
Casing Top Elev: 76.5
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

Galloway Environmental, Inc.

Log of Monitoring Well: MW-6

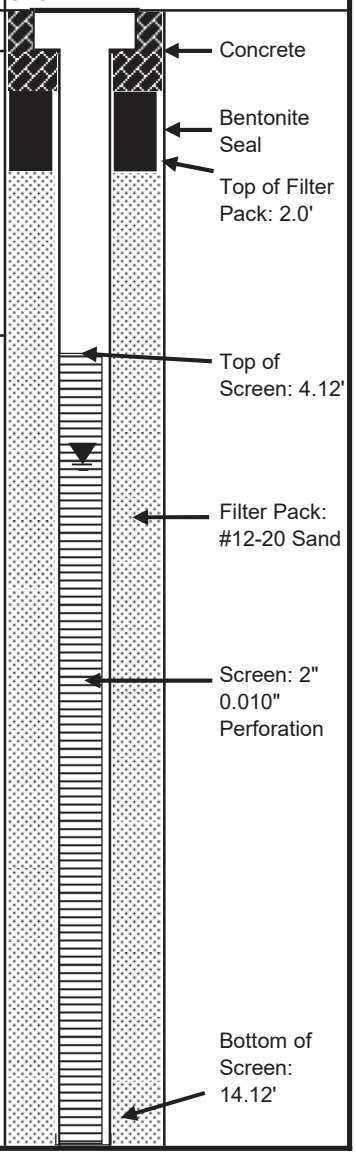
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/14/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 80ºF, mild winds	Started: 9:30 AM	Completed: 11:00 AM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 2" GRAVEL
					2" - 4' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5	Grab	MW-6@4.7	0		4' - 14' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-6
Casing Top Elev: 76.4
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

Galloway Environmental, Inc.

Log of Monitoring Well: MW-7

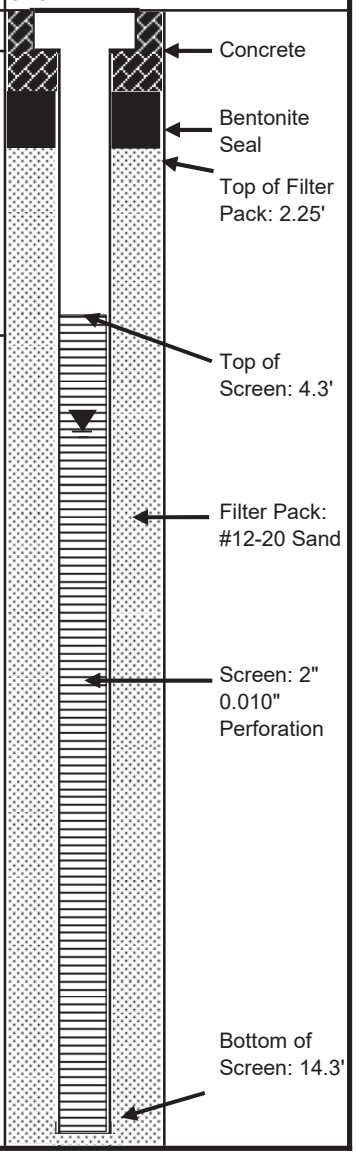
Project: National Auto	Project Number: 37018	Client: Sunset Chev/Mitchell	Date: 8/13/2018
Address, City, State: 16008 60th Street East, Sumner, WA		Drilling Contractor: Cascade	Drill Method: Hollow-Stem Auger
Weather Conditions: Sunny, 83ºF, mild winds	Started: 2:00 PM	Completed: 3:30 PM	Diameter: 6" OD boring
Logged By: Dylan Galloway	Groundwater Depth: from top of casing	Elevation: NA	Total Depth of Boring: 14'

Depth (feet)	Sample Type	Sample #	PID	Graphic Log	Soil Description
					0 - 2" GRAVEL
					2" - 4' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines and gravel, dry turning moist at 4'
5	Grab	MW-4@4.8	0		4' - 14' WELL-GRADED SILTY SAND (SW), 10YR 5/3 (brown), loose small to medium fines, moist turning wet at 5.5'
10					No staining, no odors throughout

Well Diagram

Well Number: MW-7
Casing Top Elev: 76.2
Casing Type: PVC 6" OD

8" OD flush mount traffic cover



Stabilized Ground water Grab Sample

APPENDIX C

WASTE DISPOSAL AUTHORIZATION &

BILLS OF LADING

Waste Disposal Authorization Application

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

We require the information below to determine if this waste is acceptable for disposal at the City of Tacoma Landfill, the LRI Landfill, the Wm Dickson Waller Road Landfill, or other permitted solid waste facilities. It is unlikely that you will be able to respond in the space provided. Feel free to modify the format or address the information on additional pages. Include all the information requested below and email, fax or mail to:

Date January 22, 2018	Email ehsolidwaste@tpchd.org Fax (253) 798-6498 Tacoma-Pierce County Health Department 3629 South D Street MS 1045 Waste Management Tacoma, WA 98418-6813
Site/Generator Name Sumner National Auto Parts - Fac. Site ID: 1304; Cleanup site ID: 36	
Site Owner Name Mitchell Development - Phillip Mitchell	

Describe Where Waste Originated (site address, physical location, company name, project name, etc.)
Sumner National Auto Parts, 16008 60th Street East, Sumner, Pierce County, Washington 98390

Transporter Name
To be determined - arranged by LRI

Technical Contact/Consultant Name
Gary Galloway, LHG - Galloway Environmental, Inc., 425 688-8852

Proposed Solid Waste Disposal/Treatment Facility
Tacoma Pierce county Landfill, (LRI)

Describe the Site History (if applicable)
Automotive machine shop and parts house facility. reportedly, the shop has not been in operation for several years.

Describe How Waste is Generated/Source of Waste
The shop rebuilt automobile engines. The shop had a caustic bath, a hot bath, and metal grinding machinery. The facility's waste oil drum storage and rinsing area were located on a sloped cement pad on the eastern side of the shop. There was no secondary containment existed for spills

Projected Quantity or Volume of Waste (tons or cubic yards generated per month, quarter, year, once, etc.)
200 cubic yards - one time.

Describe the Sampling Method(s) and/or Submit Sampling Plan
A Limited Phase II Site Assessment (2003) and an Independent Remedial Action Work Plan (2015) were provided by EnCo Environmenttal Corp. for the project. Galloway Environmental, Inc. (GEI) followed EnCo's Remedial Work Plan that was reviewed by Ecology and issued its opinion regarding the proposed Plan (See attachments).

Describe and Justify the Number of Samples per Volume of Waste
GEI oversaw the excavation and temporary stockpiling of approximately 100 cubic yards of impacted soil as outlined in EnCo's Remedial Work Plan and sampled the limits of the excavation and the stockpile. Based on these results, GEI removed additional soil and re-sampled the excavation and stockpiles.

Describe and Justify the Parameters Selected for Analysis
GEI collected six representative soil samples from the stockpile for waste characterization. The samples were analyzed by the laboratory for the COCs identified in the Work Plan - Six representative stockpile samples were submitted for analysis, per Ecology's recommendations (See attachments).

Waste Disposal Authorization Application

Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

Please attach or enclose:

- analytical results
- chain of custody forms
- a sampling plan
- any other documents relevant to the review of the site, facility and/or waste being characterized

By my signature below, I certify that the information presented in this application is true and complete to the best of my knowledge.

Applicant Name Gary Galloway	Applicant Title Agent/Consultant for Mitchell Development Corp.
Applicant Signature Gary Galloway LHG	Date January 22, 2018
Company Name Galloway Environmental. Inc.	Company Address 3102 220th PL SE, Sammamish, WA 98075
Phone Number 425 688-8852	Fax Number
Email Address Gary@GallowayEnvironmental.com	

Sumner National Auto Parts
Stockpiled Soils Analytical Results Summary

Sumner National Auto Parts Stockpiled Soils Sample Results summary (all Results in mg/kg)								
Sample Number	NWTPH-HCID	Gx/BTEX	Diesel	Lube Oil	VOCs (8260C)	Semi-VOCs (8270D/SIM	MTCA Metals	TCLP Lead
SP-1	ND	ND	ND	130	ND	- - -	All <MTCA	- - -
SP-2	Lube Oil	ND	ND	160	- - -	All < MTCA for cPAHs = 0.019 (see calculations)	All <MTCA except lead = 280	0.36
SP-3	Lube Oil	ND	ND	270	ND	- - -	All <MTCA	- - -
SP-4	Lube Oil	ND	ND	240	- - -	All < MTCA for cPAHs = 0.035 (see calculations)	All <MTCA - lead = 210	ND (<0.2)
SP-5							Lead = 240	0.28
SP-6							Lead = 220	ND (<0.2)
MTCA Method A CULs ULU		100/30	2000	2000	See MTCA & CLARC	See MTCA & CLARC	See MTCA Lead = 250	5

Sumner National Auto Parts
Polycyclic Aromatic Hydrocarbons MTCA Cleanup Levels
Toxicity Equivalence Calculation

SP-2	On-Site Lab.	CAL/EPA	Toxicity	Remarks
Compound	Results (ppm)	Weighting Factor	Equivalency	Remarks and MTCA Method B Soil Cleanup Levels
Benzo(a)anthracene	0.0110	0.10	0.001	
Chrysene	0.0170	0.01	0.000	
Benzo(b)fluoranthene	0.0210	0.10	0.002	
Benzo(k)fluoranthene	0.0035	0.10	0.000	ND = reported at 1/2 PQL
Benzo(a)pyrene	0.0120	1.00	0.012	
Indeno(1,2,3-cd)pyrene	0.0170	0.10	0.002	
Dibenz(a,h)anthracene	0.0035	0.40	0.001	ND = reported at 1/2 PQL
Total cPAHs	0.0850		0.019	0.137

SP-4	On-Site Lab.	CAL/EPA	Toxicity	Remarks
Compound	Results (ppb)	Weighting Factor	Equivalency	Remarks and MTCA Method B Soil Cleanup Levels
Benzo(a)anthracene	0.0200	0.10	0.002	
Chrysene	0.0310	0.01	0.000	
Benzo(b)fluoranthene	0.0380	0.10	0.004	
Benzo(k)fluoranthene	0.0130	0.10	0.001	
Benzo(a)pyrene	0.0230	1.00	0.023	
Indeno(1,2,3-cd)pyrene	0.0290	0.10	0.003	
Dibenz(a,h)anthracene	0.0036	0.40	0.001	ND = reported at 1/2 PQL
Total cPAHs	0.1576		0.035	0.137

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 30, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1710-134

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on October 11, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

Case Narrative

Samples were collected on October 10, 2017 and received by the laboratory on October 11, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	56	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	58	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	63	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	53	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	62	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	53	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	55	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**Detected**	51	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	74	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

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Samples Submitted: October 11, 2017
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Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	62	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*113*	*50-150*				
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*132*	*50-150*				
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*113*	*50-150*				
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-13-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-13-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-13-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Date of Report: October 30, 2017
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NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				

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NWTPH-Dx

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NWTPH-Dx

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NWTPH-Dx
QUALITY CONTROL

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Date of Report: October 30, 2017
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0074	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*75-131*				
Toluene-d8	*106*	*83-126*				
4-Bromofluorobenzene	*101*	*78-125*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0089	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Acetone	0.0085	0.0067	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0027	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*131*	*75-131*				
Toluene-d8	*120*	*83-126*				
4-Bromofluorobenzene	*109*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0071	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*75-131*				
Toluene-d8	*106*	*83-126*				
4-Bromofluorobenzene	*103*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0068	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*75-131*				
Toluene-d8	*110*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0074	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*75-131*				
Toluene-d8	*110*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0070	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0021	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*75-131*				
Toluene-d8	*115*	*83-126*				
4-Bromofluorobenzene	*100*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0078	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	0.033	0.0059	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0024	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-131*				
Toluene-d8	*98*	*83-126*				
4-Bromofluorobenzene	*96*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0076	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0023	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*75-131*				
Toluene-d8	*109*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0077	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	0.18	0.0058	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	0.027	0.0058	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0023	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*75-131*				
Toluene-d8	*97*	*83-126*				
4-Bromofluorobenzene	*93*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0081	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0025	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*75-131*				
Toluene-d8	*105*	*83-126*				
4-Bromofluorobenzene	*99*	*78-125*				

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Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.011	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0033	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*99*	*83-126*				
4-Bromofluorobenzene	*96*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0066	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1016S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*115*	*75-131*				
Toluene-d8	*108*	*83-126*				
4-Bromofluorobenzene	*110*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0420**	**0.0412**	0.0500	0.0500	84	82	58-126	2	20	
Benzene	**0.0462**	**0.0462**	0.0500	0.0500	92	92	72-122	0	19	
Trichloroethene	**0.0428**	**0.0418**	0.0500	0.0500	86	84	75-120	2	20	
Toluene	**0.0449**	**0.0440**	0.0500	0.0500	90	88	78-123	2	19	
Chlorobenzene	**0.0449**	**0.0443**	0.0500	0.0500	90	89	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*111*	*115*	*75-131*			
Toluene-d8					*102*	*109*	*83-126*			
4-Bromofluorobenzene					*102*	*105*	*78-125*			

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
n-Nitrosodimethylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.34	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.34	EPA 8270D	10-13-17	10-17-17	
Pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*52*	*18 - 113*				
Phenol-d6	*58*	*19 - 119*				
Nitrobenzene-d5	*58*	*19 - 119*				
2-Fluorobiphenyl	*61*	*33 - 109*				
2,4,6-Tribromophenol	*64*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.37	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.0077**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**0.020**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.057**	0.037	EPA 8270D	10-13-17	10-17-17	
Anthracene	**0.0086**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.091**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzidine	**ND**	0.37	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.099**	0.037	EPA 8270D	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.037**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.057**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.054**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**0.021**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**0.044**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.038**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**0.0083**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**0.039**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*57*	*18 - 113*				
Phenol-d6	*60*	*19 - 119*				
Nitrobenzene-d5	*63*	*19 - 119*				
2-Fluorobiphenyl	*67*	*33 - 109*				
2,4,6-Tribromophenol	*72*	*19 - 121*				
Terphenyl-d14	*68*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.36	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.0088**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.012**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**0.0094**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.016**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.016**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.36	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.015**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.0082**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.015**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.018**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**0.0090**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.011**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**0.013**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 113*				
Phenol-d6	*35*	*19 - 119*				
Nitrobenzene-d5	*41*	*19 - 119*				
2-Fluorobiphenyl	*45*	*33 - 109*				
2,4,6-Tribromophenol	*42*	*19 - 121*				
Terphenyl-d14	*44*	*30 - 116*				

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Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
n-Nitrosodimethylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.39	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.013**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.011**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.39	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.010**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.0089**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.011**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*18 - 113*				
Phenol-d6	*48*	*19 - 119*				
Nitrobenzene-d5	*50*	*19 - 119*				
2-Fluorobiphenyl	*57*	*33 - 109*				
2,4,6-Tribromophenol	*57*	*19 - 121*				
Terphenyl-d14	*60*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
n-Nitrosodimethylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.42	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.046**	0.042	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**0.067**	0.042	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.013**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.010**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
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Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.021**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.010**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.42	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.0095**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.015**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.013**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*45*	*18 - 113*				
Phenol-d6	*46*	*19 - 119*				
Nitrobenzene-d5	*60*	*19 - 119*				
2-Fluorobiphenyl	*62*	*33 - 109*				
2,4,6-Tribromophenol	*64*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

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Date of Report: October 30, 2017
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Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.020**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.012**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**0.014**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	

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Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.083**	0.035	EPA 8270D	10-13-17	10-17-17	
Anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.10**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.087**	0.035	EPA 8270D	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.041**	0.035	EPA 8270D	10-13-17	10-17-17	
Chrysene	**0.058**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.085**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**0.024**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.054**	0.035	EPA 8270D	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.055**	0.035	EPA 8270D	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.094**	0.035	EPA 8270D	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 113*				
Phenol-d6	*40*	*19 - 119*				
Nitrobenzene-d5	*32*	*19 - 119*				
2-Fluorobiphenyl	*49*	*33 - 109*				
2,4,6-Tribromophenol	*59*	*19 - 121*				
Terphenyl-d14	*61*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.16**	0.035	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.037**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.056**	0.035	EPA 8270D	10-13-17	10-18-17	
1-Methylnaphthalene	**0.027**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.036**	0.035	EPA 8270D	10-13-17	10-18-17	
Anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.031**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.036**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.058**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**0.018**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.052**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.18**	0.035	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*47*	*18 - 113*				
Phenol-d6	*57*	*19 - 119*				
Nitrobenzene-d5	*56*	*19 - 119*				
2-Fluorobiphenyl	*67*	*33 - 109*				
2,4,6-Tribromophenol	*62*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**0.044**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.13**	0.035	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**0.036**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.023**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.015**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.033**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.023**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.021**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.017**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.021**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.012**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.017**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.037**	0.035	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*46*	*18 - 113*				
Phenol-d6	*54*	*19 - 119*				
Nitrobenzene-d5	*57*	*19 - 119*				
2-Fluorobiphenyl	*60*	*33 - 109*				
2,4,6-Tribromophenol	*59*	*19 - 121*				
Terphenyl-d14	*60*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.36	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.011**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.013**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.0073**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**0.0073**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.034**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**0.0076**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.040**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzidine	**ND**	0.36	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.037**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.020**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.031**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.038**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**0.013**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.023**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.029**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.040**	0.036	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*18 - 113*				
Phenol-d6	*51*	*19 - 119*				
Nitrobenzene-d5	*53*	*19 - 119*				
2-Fluorobiphenyl	*63*	*33 - 109*				
2,4,6-Tribromophenol	*57*	*19 - 121*				
Terphenyl-d14	*63*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Pyridine	**ND**	0.33	EPA 8270D	10-13-17	10-16-17	
Phenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Isophorone	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Carbazole	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzidine	**ND**	0.33	EPA 8270D	10-13-17	10-16-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*65*	*19 - 119*				
Nitrobenzene-d5	*66*	*19 - 119*				
2-Fluorobiphenyl	*72*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.956**	**1.07**	1.33	1.33	72	80	39 - 109	11	36	
2-Chlorophenol	**0.979**	**1.11**	1.33	1.33	74	83	42 - 105	13	35	
1,4-Dichlorobenzene	**0.462**	**0.547**	0.667	0.667	69	82	31 - 103	17	37	
n-Nitroso-di-n-propylamine	**0.476**	**0.533**	0.667	0.667	71	80	36 - 104	11	34	
1,2,4-Trichlorobenzene	**0.479**	**0.540**	0.667	0.667	72	81	32 - 104	12	38	
4-Chloro-3-methylphenol	**1.10**	**1.16**	1.33	1.33	83	87	48 - 107	5	31	
Acenaphthene	**0.545**	**0.561**	0.667	0.667	82	84	38 - 102	3	33	
4-Nitrophenol	**1.11**	**1.10**	1.33	1.33	83	83	27 - 121	1	35	
2,4-Dinitrotoluene	**0.527**	**0.538**	0.667	0.667	79	81	36 - 103	2	34	
Pentachlorophenol	**1.36**	**1.29**	1.33	1.33	102	97	21 - 114	5	37	
Pyrene	**0.519**	**0.545**	0.667	0.667	78	82	46 - 108	5	31	
Surrogate:										
2-Fluorophenol					*69*	*80*	*18 - 113*			
Phenol-d6					*73*	*82*	*19 - 119*			
Nitrobenzene-d5					*74*	*83*	*19 - 119*			
2-Fluorobiphenyl					*76*	*78*	*33 - 109*			
2,4,6-Tribromophenol					*83*	*77*	*19 - 121*			
Terphenyl-d14					*77*	*79*	*30 - 116*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-01					
Client ID:	**NAP-1@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**18**	0.52	6010C	10-18-17	10-18-17	
Lead	**11**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-02					
Client ID:	**NAP-2@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**31**	0.52	6010C	10-18-17	10-18-17	
Lead	**120**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-03					
Client ID:	**NAP-3@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.56	6010C	10-18-17	10-18-17	
Chromium	**25**	0.56	6010C	10-18-17	10-18-17	
Lead	**46**	5.6	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.28	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-04					
Client ID:	**NAP-4@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**6.5**	0.61	6010C	10-18-17	10-18-17	
Chromium	**54**	0.61	6010C	10-18-17	10-18-17	
Lead	**4400**	61	6010C	10-18-17	10-19-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-05					
Client ID:	**NAP-5@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**27**	0.52	6010C	10-18-17	10-18-17	
Lead	**34**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-06					
Client ID:	**NAP-6@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**1.4**	0.54	6010C	10-18-17	10-18-17	
Chromium	**21**	0.54	6010C	10-18-17	10-18-17	
Lead	**73**	5.4	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-07					
Client ID:	**NAP-7@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**16**	0.52	6010C	10-18-17	10-18-17	
Lead	**46**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-08					
Client ID:	**NAP-8@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.58	6010C	10-18-17	10-18-17	
Chromium	**16**	0.58	6010C	10-18-17	10-18-17	
Lead	**16**	5.8	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.29	7471B	10-18-17	10-18-17	
Lab ID:	10-134-09					
Client ID:	**NAP-9@2'**					
Arsenic	**ND**	13	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.63	6010C	10-18-17	10-18-17	
Chromium	**16**	0.63	6010C	10-18-17	10-18-17	
Lead	**20**	6.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-10					
Client ID:	**NAP-10@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.53	6010C	10-18-17	10-18-17	
Chromium	**27**	0.53	6010C	10-18-17	10-18-17	
Lead	**340**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-11					
Client ID:	**NAP-11@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.62	6010C	10-18-17	10-18-17	
Chromium	**19**	0.62	6010C	10-18-17	10-18-17	
Lead	**82**	6.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-12					
Client ID:	**NAP-12@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.53	6010C	10-18-17	10-18-17	
Chromium	**35**	0.53	6010C	10-18-17	10-18-17	
Lead	**500**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
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Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-13					
Client ID:	**NAP-13@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.55	6010C	10-18-17	10-18-17	
Chromium	**20**	0.55	6010C	10-18-17	10-18-17	
Lead	**ND**	5.5	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.28	7471B	10-18-17	10-18-17	
Lab ID:	10-134-14					
Client ID:	**NAP-14@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**0.76**	0.51	6010C	10-18-17	10-18-17	
Chromium	**33**	0.51	6010C	10-18-17	10-18-17	
Lead	**270**	5.1	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-15					
Client ID:	**NAP-15@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**1.4**	0.53	6010C	10-18-17	10-18-17	
Chromium	**76**	0.53	6010C	10-18-17	10-18-17	
Lead	**1100**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-16					
Client ID:	**NAP-16@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.62	6010C	10-18-17	10-18-17	
Chromium	**17**	0.62	6010C	10-18-17	10-18-17	
Lead	**24**	6.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-17					
Client ID:	**NAP-SP-1**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.54	6010C	10-18-17	10-18-17	
Chromium	**21**	0.54	6010C	10-18-17	10-18-17	
Lead	**170**	5.4	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	
Lab ID:	10-134-18					
Client ID:	**NAP-SP-2**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**24**	0.52	6010C	10-18-17	10-18-17	
Lead	**280**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
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Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-19					
Client ID:	**NAP-SP-3**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.51	6010C	10-18-17	10-18-17	
Chromium	**20**	0.51	6010C	10-18-17	10-18-17	
Lead	**90**	5.1	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-20					
Client ID:	**NAP-SP-4**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**0.94**	0.53	6010C	10-18-17	10-18-17	
Chromium	**28**	0.53	6010C	10-18-17	10-18-17	
Lead	**210**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
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Project: 37018

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-18-17
Date Analyzed:	10-18-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1018SM1&MB1018S2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-18-17
Date Analyzed: 10-18-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-134-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Cadmium	**1.27**	**1.29**	2	0.50	
Chromium	**19.5**	**17.6**	10	0.50	
Lead	**67.9**	**75.8**	11	5.0	
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-18-17
Date Analyzed: 10-18-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-134-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**90.4**	90	**89.8**	90	1	
Cadmium	50.0	**45.7**	89	**45.8**	89	0	
Chromium	100	**108**	88	**107**	87	1	
Lead	250	**283**	86	**285**	87	0	
Mercury	0.500	**0.543**	109	**0.524**	105	4	

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Date of Report: October 30, 2017
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Project: 37018

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Diesel Range Organics	**ND**	26	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil	**140**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Diesel Range Organics	**ND**	150	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**880**	61	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**220**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
Diesel Range Organics	**ND**	80	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**420**	53	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Diesel Range Organics	**ND**	44	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**350**	51	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*72*	*50-150*				
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
Diesel Range Organics	**ND**	66	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**460**	53	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*71*	*50-150*				

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NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Diesel Range Organics	**ND**	27	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil	**130**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
Diesel Range Organics	**ND**	45	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**160**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*67*	*50-150*				
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Diesel Range Organics	**ND**	61	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**270**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
Diesel Range Organics	**ND**	48	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**240**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				

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Date of Report: October 30, 2017
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NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*71*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-134-02										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil	**133**	**97.7**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*100*	*107*	*50-150*			

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Project: 37018

TCLP LEAD
EPA 1311/6010C

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-18					
Client ID:	**NAP-SP-2**					
Lead	**0.36**	0.20	6010C	10-26-17	10-26-17	
Lab ID:	10-134-20					
Client ID:	**NAP-SP-4**					
Lead	**ND**	0.20	6010C	10-26-17	10-26-17	

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Project: 37018

TCLP LEAD
EPA 1311/6010C
METHOD BLANK QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	MB1026TM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	0.20

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TCLP LEAD
EPA 1311/6010C
DUPLICATE QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	10-134-18

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**0.362**	**0.376**	4	0.20	

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TCLP LEAD
EPA 1311/6010C
MS/MSD QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	10-134-18

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	10.0	**9.70**	93	**9.78**	94	1	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

% MOISTURE

Date Analyzed: 10-12-17

Client ID	Lab ID	% Moisture
NAP-1@0.5'	10-134-01	3
NAP-2@0.5'	10-134-02	3
NAP-3@2'	10-134-03	10
NAP-4@2'	10-134-04	18
NAP-5@0.5'	10-134-05	4
NAP-6@2'	10-134-06	7
NAP-7@0.5'	10-134-07	3
NAP-8@2'	10-134-08	14
NAP-9@2'	10-134-09	20
NAP-10@0.5'	10-134-10	5
NAP-11@2'	10-134-11	19
NAP-12@0.5'	10-134-12	5
NAP-13@2'	10-134-13	9
NAP-14@0.5'	10-134-14	2
NAP-15@0.5'	10-134-15	5
NAP-16@2'	10-134-16	20
NAP-SP-1	10-134-17	8
NAP-SP-2	10-134-18	4
NAP-SP-3	10-134-19	3
NAP-SP-4	10-134-20	7

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENV. INC.
Project Number: 37018
Project Name: National Auto Parts
Project Manager: GARY GALLOWAY
Sampled by: GARY Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-134

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals NO	Total MTCA Metals yes	TCLP Metals	HEM (oil and grease) 1664A				% Moisture
1	NAP-1 @ 0.5'	10/10/17	0900	S		X							X						X	X						X
2	2 @ 0.5'		0910			X			X	X									X	X						
3	3 @ 2'		0920			X							X						X	X						
4	4 @ 2'		0930			X			X	X									X	X						
5	5 @ 0.5'		0940			X				X									X	X						
6	6 @ 2'		1000			X			X				X						X	X						
7	7 @ 0.5'		1020			X				X									X	X						
8	8 @ 2'		10:30			X							X						X	X						
9	9 @ 2'		10:40			X							X						X	X						
10	10 @ 0.5'		10:50			X				X									X	X						

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	10/11/17	10:45
Received	[signature]	OnSite Env	10/11/17	10:45
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 10/17/17. DB (STA)
○ Added 10/20/17. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENV.
Project Number: 37018
Project Name: National Auto Parts
Project Manager: GARY GALLOWAY
Sampled by: Gary Galloway

Turnaround Request (in working days) (Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-134

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals LEAD	HEM (oil and grease) 1664A				% Moisture
11	NAP 11@ 2'	10/10/17	11:20	S		X			~~X~~ NO	X										X						X
12	12@ 0.5'		11:40			X			X				X							X						
13	13@ 2'		12:00			X				X										X						
14	14@ 0.5'		12:20			X			X	X										X						
15	15@ 0.5'		13:10			X			X				X							X						
16	16@ 2'		13:30			X				X										X						
17	SP-1		14:20			X			X	X										X						
18	SP-2		14:40			X			X				X							X	O					
19	SP-3		14:50			X			X	X										X						
20	SP-4		15:15			X			X				X							X	O					

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	10/11/17	10:45
Received	[signature]	OnSite Env	10/11/17	1045
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 12, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1712-078

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 7, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

Case Narrative

Samples were collected on December 6, 2017 and received by the laboratory on December 7, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-01					
Client ID:	**17@1'**					
Lead	**65**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-02					
Client ID:	**18@1'**					
Lead	**88**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-03					
Client ID:	**19@1'**					
Lead	**180**	5.6	6010C	12-11-17	12-11-17	
Lab ID:	12-078-04					
Client ID:	**20@1'**					
Lead	**310**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-05					
Client ID:	**21@1'**					
Lead	**420**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-06					
Client ID:	**22@1'**					
Lead	**680**	5.9	6010C	12-11-17	12-11-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-07					
Client ID:	**23@1'**					
Lead	**1200**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-08					
Client ID:	**24@1'**					
Lead	**240**	5.7	6010C	12-11-17	12-11-17	
Lab ID:	12-078-09					
Client ID:	**25@3.5'**					
Lead	**39**	6.1	6010C	12-11-17	12-11-17	
Lab ID:	12-078-10					
Client ID:	**26@3.5'**					
Lead	**160**	6.3	6010C	12-11-17	12-11-17	
Lab ID:	12-078-11					
Client ID:	**27@3'**					
Lead	**410**	5.9	6010C	12-11-17	12-11-17	
Lab ID:	12-078-12					
Client ID:	**28@3'**					
Lead	**8.6**	6.0	6010C	12-11-17	12-11-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-13					
Client ID:	**29@1'**					
Lead	**740**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-14					
Client ID:	**30@1'**					
Lead	**1600**	5.4	6010C	12-11-17	12-11-17	
Lab ID:	12-078-15					
Client ID:	**SP-5**					
Lead	**240**	6.0	6010C	12-11-17	12-11-17	
Lab ID:	12-078-16					
Client ID:	**SP-6**					
Lead	**220**	5.8	6010C	12-11-17	12-11-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-11-17
Date Analyzed:	12-11-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1211SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 12-11-17
Date Analyzed: 12-11-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-032-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**7.25**	**6.55**	10	5.0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 12-11-17
Date Analyzed: 12-11-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-032-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**227**	88	**225**	87	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

% MOISTURE

Date Analyzed: 12-11-17

Client ID	Lab ID	% Moisture
17@1'	12-078-01	10
18@1'	12-078-02	9
19@1'	12-078-03	10
20@1'	12-078-04	9
21@1'	12-078-05	9
22@1'	12-078-06	15
23@1'	12-078-07	9
24@1'	12-078-08	12
25@3.5'	12-078-09	19
26@3.5'	12-078-10	20
27@3'	12-078-11	16
28@3'	12-078-12	17
29@1'	12-078-13	9
30@1'	12-078-14	7
SP-5	12-078-15	17
SP-6	12-078-16	14

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENVIRONMENTAL
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total lead				% Moisture
1	17@ 1'	12/6/17	13:30	S	1																		X				X
2	18@ 1'		13:40																				X				
3	19@ 1'		13:50																				X				
4	20@ 1'		13:55																				X				
5	21@ 1'		14:00																				X				
6	22@ 1'		14:05																				X				
7	23@ 1'		14:10																				X				
8	24@ 1'		14:20																				X				
9	25@ 3.5'		14:30																				X				
10	26@ 3.5'		14:40																				X				

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Lead Total				% Moisture
11	27@3'	12/6/17	15:00	S	1																		X				X
12	28@3'		15:10																				X				X
13	29@1'		15:20																				X				X
14	30@1'		15:30																				X				X
15	SP-5		16:00																				X				X
16	SP-6		16:10																				X				X

	Signature	Company	Date	Time
Relinquished	[signature]	Galloway Env.	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 20, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1712-078B

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 7, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

Case Narrative

Samples were collected on December 6, 2017 and received by the laboratory on December 7, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-15					
Client ID:	**SP-5**					
Lead	**0.28**	0.20	6010C	12-18-17	12-18-17	
Lab ID:	12-078-16					
Client ID:	**SP-6**					
Lead	**ND**	0.20	6010C	12-18-17	12-18-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
METHOD BLANK QUALITY CONTROL

Date Prepared:	12-15-17
Date Extracted:	12-18-17
Date Analyzed:	12-18-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	MB1218TM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	0.20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
DUPLICATE QUALITY CONTROL

Date Prepared: 12-15-17
Date Extracted: 12-18-17
Date Analyzed: 12-18-17

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 12-078-16

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	0.20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
MS/MSD QUALITY CONTROL

Date Prepared: 12-15-17
Date Extracted: 12-18-17
Date Analyzed: 12-18-17

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 12-078-16

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	10.0	**9.53**	95	**9.53**	95	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENVIRONMENTAL
Project Number: 37018
Project Name: National Auto Ports
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total lead				% Moisture
1	17@ 1'	12/6/17	13:30	S	1																		X				X
2	18@ 1'		13:40																				X				
3	19@ 1'		13:50																				X				
4	20@ 1'		13:55																				X				
5	21@ 1'		14:00																				X				
6	22@ 1'		14:05																				X				
7	23@ 1'		14:10																				X				
8	24@ 1'		14:20																				X				
9	25@ 3.5'		14:30																				X				
10	26@ 3.5'		14:40																				X				

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 12/12/17 ~~3~~ STA

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP ~~Metals~~ Lead	HEM (oil and grease) 1664A	Lead Total				% Moisture
11	27@3'	12/6/17	15:00	S	1																		X				X
12	28@3'		15:10																				X				X
13	29@1'		15:20																				X				X
14	30@1'		15:30																				X				X
15	SP-5		16:00																		X		X				X
16	SP-6		16:10																		X		X				X

	Signature	Company	Date	Time
Relinquished	[signature]	Galloway Env.	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

SUMNER NATIONAL AUTO PARTS REMEDIAL ACTION PHOTOS

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

July 12, 2017

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

Re: Further Action at the following Site:

- **Site Name:** Sumner National Auto Parts
- **Site Address:** 16008 60th Street East, Sumner, Pierce County, WA 98390
- **Facility/Site No.:** 1304
- **Cleanup Site No.:** 3653
- **VCP Project No.:** SW1547

Dear Mr. Suss:

The Washington State Department of Ecology (Ecology) received your request for an opinion regarding a proposed remedial action as part of your independent cleanup of Sumner National Auto Parts (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below. **Enclosure A** includes pertinent figures from the work plan for the Site, as currently known to Ecology (Figures 1 through 4).

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Email correspondence from Mr. Tim Mullin, Ecology, to Mr. Jonathan Kemp, Environmental Corporation (EnCo), dated June 27, 2017.

2. EnCo, *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017.

3. Ecology, RE: State Environmental Policy Act Comments, dated April 3, 2017.

4. Email correspondence from Mr. Tim Mullin, Ecology, to Mr. Jonathan Kemp, EnCo, dated January 27, 2017.

The above documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

This opinion letter provides comments Enco's *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017. Excavation of contaminated soils and installation of six additional monitoring wells is proposed. A Site description and selected figures (1-4) are included in **Enclosure A.**

Comments:

1. Overall, Ecology concurs with the remedial action proposed and the feasibility study. The goals of the remedial action are to delineate the extent of contamination, characterize the Site, and to achieve cleanup levels at the Site for Site COCs via excavation.

Ecology concurs that excavation is the remedial action with the highest probability of contamination removal and meeting the proposed MTCA Method A and Method B cleanup levels. Standard points of compliance for achieving those cleanup levels in soil and groundwater are anticipated to be used for the Site.

2. Field work for the proposed excavation and well installation was authorized via email from Ecology to EnCo on June 27, 2017. That communication is included in **Enclosure B**. Ecology concurred with the work plan and provided selected comments in advance of this opinion letter because the work is time sensitive. In order to avoid a potentially high groundwater table, excavation work must occur between July and September. In Ecology's estimate, the opinion letter would not be submitted until potentially too late to accommodate this window of opportunity, and thus provided the advance email notification to proceed after initial review of the *Independent Remedial Cleanup Action Work Plan.*

3. Ecology concurs that implementation of the remedial action outlined in the work plan likely will result in areal and vertical delineation of Site soils per WAC 173-340-350(7)(c)(iii)(B), and provides acceptable contingencies in case contamination is more widely distributed than anticipated. Ecology concurs with the work plan contingencies in that additional soil may require removal and off-Property disposal depending on the laboratory analytical results. Ecology encourages the removal of soil as dictated by the laboratory results in order to cleanup Site contamination. Specifically, it is recommended to await analytical results and excavate any exceedances of MTCA Method A or Method B cleanup levels in soil encountered prior to backfilling the excavation or redistributing the gravel stockpile.

4. Where field screening or visual observations indicate contaminated soils, ethylene glycol (antifreeze) should be added to the Site contaminants of concern (COC) list.
    a. Sample for ethylene glycol where staining of Site soils indicate a potential release of antifreeze and/or where sampling of Site soils are sampled for total petroleum hydrocarbons (TPH) and/or volatile organic compounds (VOCs). Ethylene glycol has a MTCA Method B cleanup value in soil for unrestricted land use of 160,000 milligrams per kilogram.
    b. Ecology recommends sampling soil stockpiles as needed for ethylene glycol as well.
    c. Groundwater should also be sampled for ethylene glycol. The MTCA Method B cleanup value for ethylene glycol in groundwater is 16,000 μg/L.

5. In order to maximize excavation efficiency, avoid a potentially high water table, and minimize the risk of cross-contamination of contaminated soils coming into contact with high groundwater, Ecology agrees with the decision to complete the excavation at the anticipated seasonal minimum at the Site for groundwater (July through September).

6. It appears that additional information requested by Ecology via email correspondence dated January 27, 2017 has been incorporated into the work plan. A copy of this correspondence is included in **Enclosure B**.

7. Ecology concurs with landfill disposal of contaminated Site soils at an approved facility.

8. Ecology concurs with sampling of gravels for selected COCs in order to verify that the gravel stockpile is not contaminated. These gravels were placed on the east side of the Property sometime between 2002 and 2015, after cleanup had started. If the gravel stockpile is determined to be contaminated, it should be disposed of at an approved facility.

9. Where field screening or visual observations indicate contamination is likely to be present outside of Area 9, soil sampling may need to be adjusted to a broader scope of COCs (e.g., similar to the list proposed for Area 9). If there is any question whether or not additional analytical results should be obtained at a given sample location, Ecology recommends collecting the additional data. If analytical data indicates that there may be uncertainty regarding whether or not a soil stockpile should be disposed of off-Property at an approved facility, Ecology suggests disposal of the soil stockpile at the off-Property facility.

10. Ecology notes that the appropriate local permitting applicable to the remedial action and evaluation under the State Environmental Policy Act (SEPA) appears to have been completed. Ecology provided SEPA comments to the City of Sumner in a letter dated April 3, 2017.

11. Site topography is relatively flat. Local topography gently decreases to the north and northwest, towards the nearest surface water body, Salmon Creek, which is located approximately 2,200 feet to the north. Ecology concurs with the monitoring well network as proposed, though Ecology understands field conditions or utility conflicts may cause the final well locations to be adjusted. However, should analytical results or groundwater flow direction indicate additional monitoring wells are necessary, delineate the Site per WAC 173-340-350(7)(c)(iii).

12. In October 2015 groundwater was reported at approximately 5 feet below top of casing.

Ecology concurs with the proposed installation of six additional monitoring wells. Field observations may require longer monitoring well screens than proposed. Screen lengths should be set in order to produce sufficient water volume for sampling from each well and should ideally extend slightly above the maximum water table. All monitoring wells should be properly developed. Ecology recommends using low flow groundwater sampling methodology to sample all Site monitoring wells.

13. After monitoring well installation, Ecology recommends waiting at least two weeks before sampling the monitoring wells in order to ensure a representative sample. The reasons for this is because metals are Site COCs and results may be influenced immediately after drilling by suspended particles in water within the monitoring well.

14. For metals in groundwater, Ecology recommends sampling for both total and dissolved metals.

15. On page 8 of the *Independent Remedial Cleanup Action Work Plan*, item 15, "(MW-1 to MW-6)" should be "(MW-2 to MW-7)" as monitoring well MW-1 has already been installed at the Site.

16. Where investigation derived waste is generated associated with the proposed monitoring well installation, Ecology recommends that these soils and any purge or decontamination water be disposed of off-Site at an approved facility.

17. There are good discussions of the exposure pathways in the *Independent Remedial Cleanup Action Work Plan*. In a post-cleanup comprehensive report for the Site, review and discuss each pathway. It appears the ecological pathway remains to be considered. For the comprehensive report, please ensure they are submitted under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.

18. A terrestrial ecology evaluation (TEE) must be performed as part of this cleanup. Please fill out the form on Ecology's website and submit it to us (along with any supporting documentation, as appropriate) for review. The form can be found at: https://fortress.wa.gov/ecy/publications/summarypages/ecy090300.html

19. For reference, here are links to Ecology's remedial investigation (RI), feasibility study (FS), cleanup action plan (CAP) checklists. Final reports are encouraged to use these checklists to guide report format.
    a. RI: https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html
    b. FS: https://fortress.wa.gov/ecy/publications/SummaryPages/1609007.html
    c. CAP: https://fortress.wa.gov/ecy/publications/SummaryPages/1609008.html

20. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website http://www.ecy.wa.gov/eim. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination; in addition this data be submitted concurrently with submittal of the environmental report[1].** Please be sure to submit all soil and groundwater data collected to date, as well as any future data, in this format. Be advised that Ecology requires up to four weeks to process the data once they are received.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 360-407-6265 or e-mail at Tim.Mullin@ecy.wa.gov.

Sincerely,

Tim Mullin, LG
SWRO Toxics Cleanup Program

TCM: kb

By Certified Mail: [91 7199 9991 7037 0291 6418]

Enclosures (2): A – Site Description and Selected Site Figures
B – Email Correspondence

cc: Jonathan Kemp, LG, EnCo Environmental Corp.
Nick Acklam, Ecology
Matt Alexander, Ecology

Enclosure A

Site Description and Selected Site Figures

1) Figure 1: Vicinity
2) Figure 2: Parcel & Aerial
3) Figure 3: Soil and Groundwater Test Results – Before Clean Up
4) Figure 4: Excavation Footprints & Temporary Soil Stockpile Proposed During Clean Up

Site Description

Site and Property:

The Site is located on the parcel located at 16008 60th Street East, Sumner, Pierce County, Washington. According to the Pierce County Assessor-Treasurer's website, the Site is associated with parcel 0520198006, which totals 1.58 acres in size (Property). The Property is zoned commercial. Past Property use was for rebuilding automobile engines and metal machining within the current Property building. No engine rebuilding or metal machining activities currently take place at the Property.

Property History and Current Use:

The Property is occupied by a retail automobile parts supply and sales company in a single building. The 7,500 square foot metal roof and metal frame building was constructed in 1979. A machine shop used to occupy the southern 4,500 square feet of the building, which is used for automobile parts storage today. A lean to consisting of an awning and a concrete slab used to be attached to the east side of the center portion of the building. These features were removed sometime in the mid 1990's.

Property Vicinity:

The Property is in an area of mixed residential, commercial, and agricultural properties.

Geology/Soils:

Site soils observed to date are fill covering predominantly sand with some silts and gravels.

Groundwater:

Currently, one groundwater monitoring well (MW-1) is present at the Site. Installed in October 2015, groundwater was measured at approximately 5 feet bgs. MW-1 was placed in the source area of contamination at the Site.

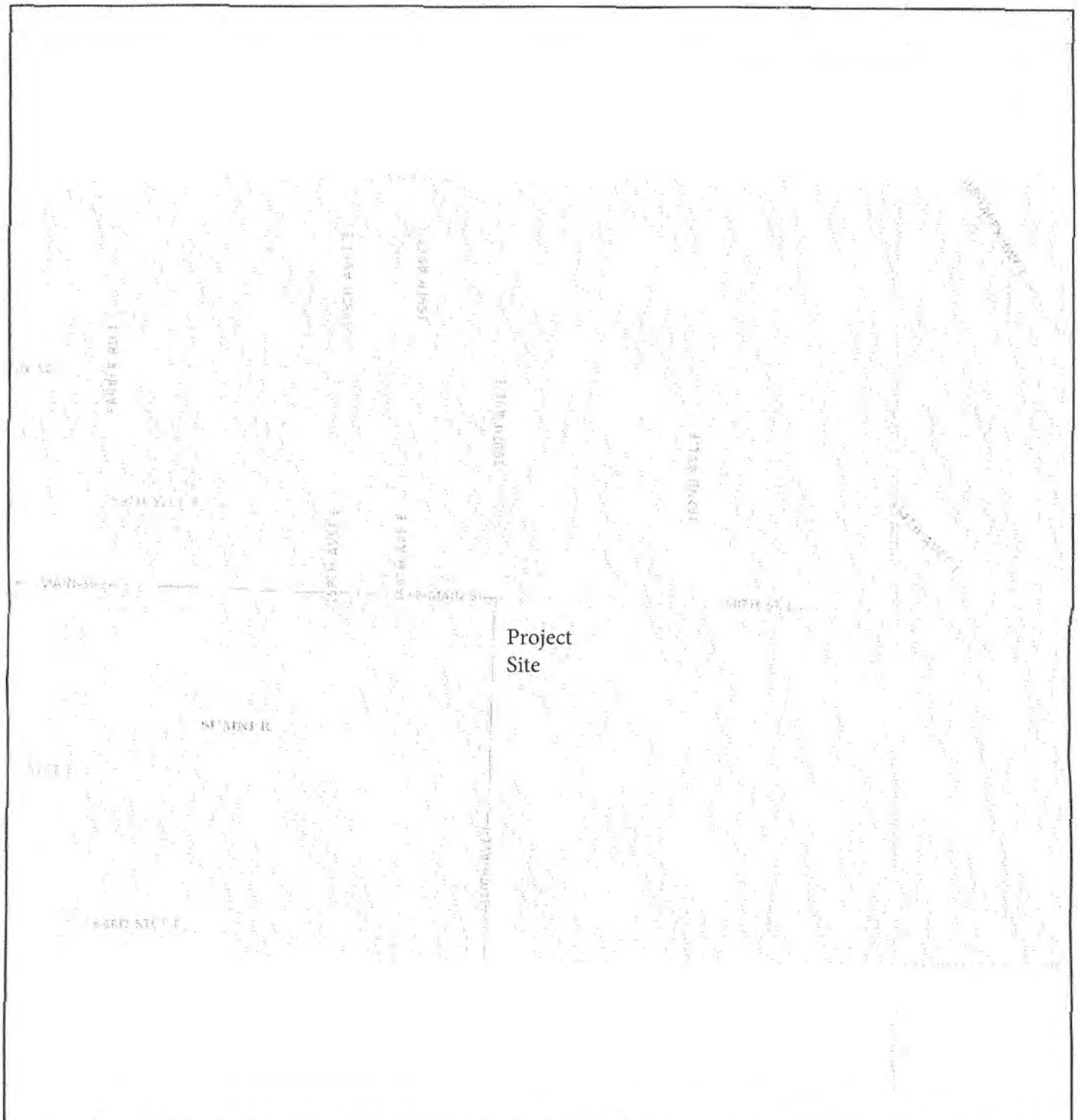
Surface/Storm Water/Septic Systems:

On-Property, a low area east of the building reportedly collected water into a pool up to 20 feet by 40 feet in size. Salmon Creek, located approximately 2,200 feet north and of the Site is the

nearest surface water. The Puyallup River is located approximately 5,100 southwest of the Site. It is unknown if a storm water system is present at the Site. The building at the Property is connected to public water and sewer. No septic system is present.

Source of Contamination & Contamination Extent:

According to EnCo's Independent Remedial Cleanup Action Work Plan, the releases were related to periodic dumping of hot caustic wash water in the soils east of the former lean-to. The former lean-to consisted of an awning over a small concrete pad (16 feet long by 18.5 feet wide) were some fluid storage and engine cleaning occurred. Automobile engines were also reportedly spray cleaned on bare soil to the east of the concrete slab. In response to anonymous complaints, Ecology identified these releases in an inspection on February 7, 1991. It is not known how long the improper disposal activities occurred at the Property; however, the current building and engine rebuild operation is believed to have started in 1979.



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

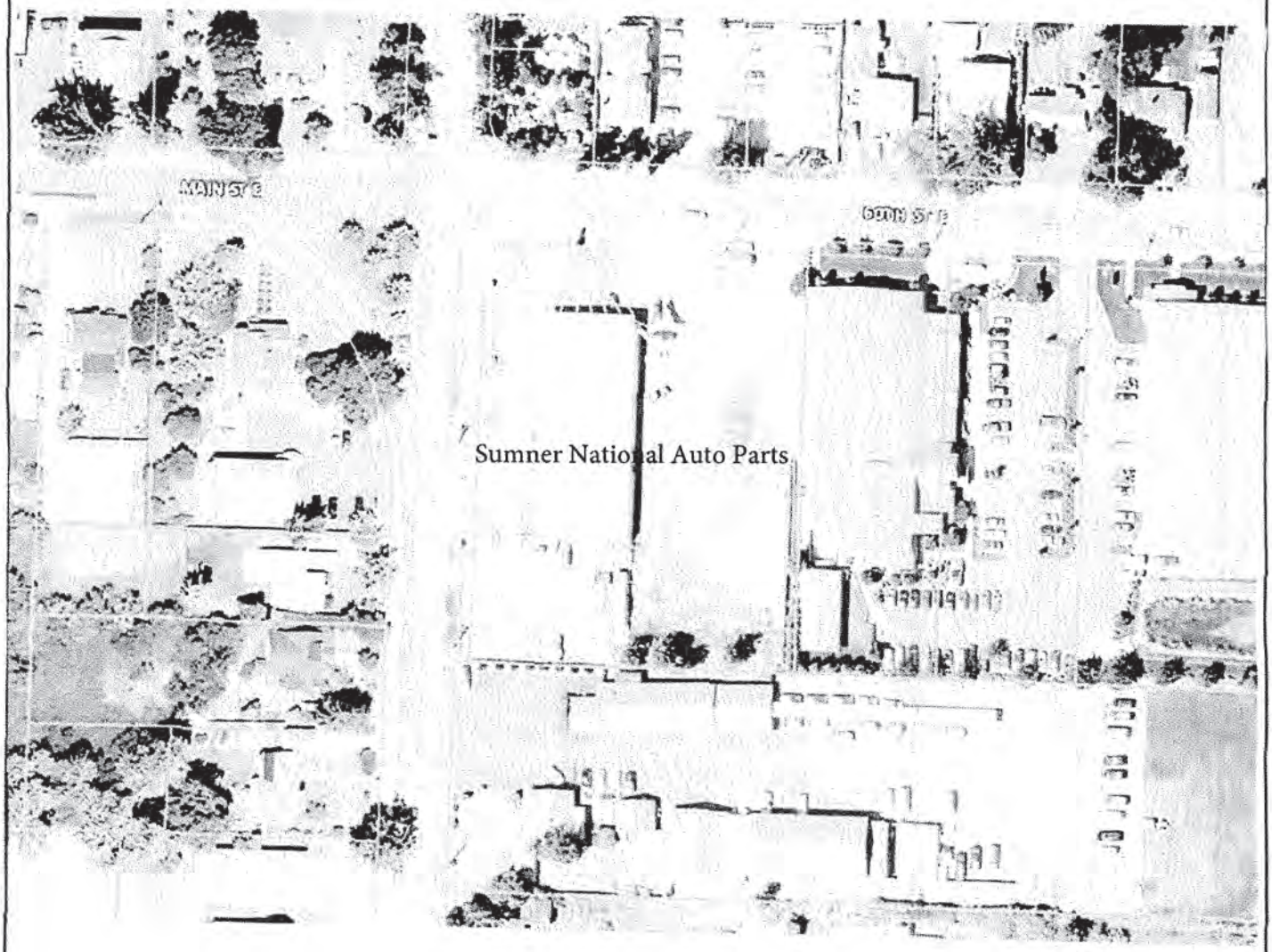
N

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

Figure 3

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

EnCo Environmental Corporation

VICINITY MAP
N.T.S.

1991 & 2002 SAMPLE DATA

TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
[illegible]	(SURFACE)	[illegible]
77479		pH-10.97, RE-ND, TO-ND, XY-4.9
77479		RE-ND, TO-1.6, XY-ND
1	1A (.5') 1B (1.25')	HO-ND, PB-ND HO-ND
2	2A (.5') 2B (.83') 2C (1.33') 2D (2') 2E (2.67')	HO-ND, PB-120 HO-ND, PB-12 HO-ND, PB-120 HO-ND HO-ND
3	3A (1') 3B (1.5')	HO-ND HO-ND
4	4A (1')	HO-ND
5	5A (1')	HO-ND
6	6A (1.5')	HO-ND
[illegible]	7A (1.17')	HO-1700, CD-1.9, PB-410
[illegible]	8A (1.17')	HO-ND, CD-1.2, PB-[illegible]
[illegible]	9A (1.17')	HO-ND, PB-220
[illegible]	10A (1.17')	HO-1700, CD-1.2, PB-[illegible]
[illegible]	11A (1.17')	HO-ND, PB-220
[illegible]	12A (1.17') 12B (1.5')	HO-ND, PB-[illegible] HO-ND
[illegible]	13A (1.17')	HO-ND, CD-1.9, PB-300
[illegible]	14A (1.17')	HO-ND, CD-1.5, PB-3.6
15	15A (.25') 15B (.75')	HO-ND, PB-110 HO-ND, PB-160
[illegible]	16A (.25') 16B (.75')	HO-290, PB-430 HO-ND, PB-330
17	17A (.25') 17B (.75')	HO-ND, PB-220 HO-ND, PB-9
18	18A (.25') 18B (1')	HO-ND, PB-45 HO-ND, PB-47
[illegible]	19A (.33') 19B (1')	HO-ND, PB-330 HO-ND, PB-[illegible]

2015 SAMPLE DATA

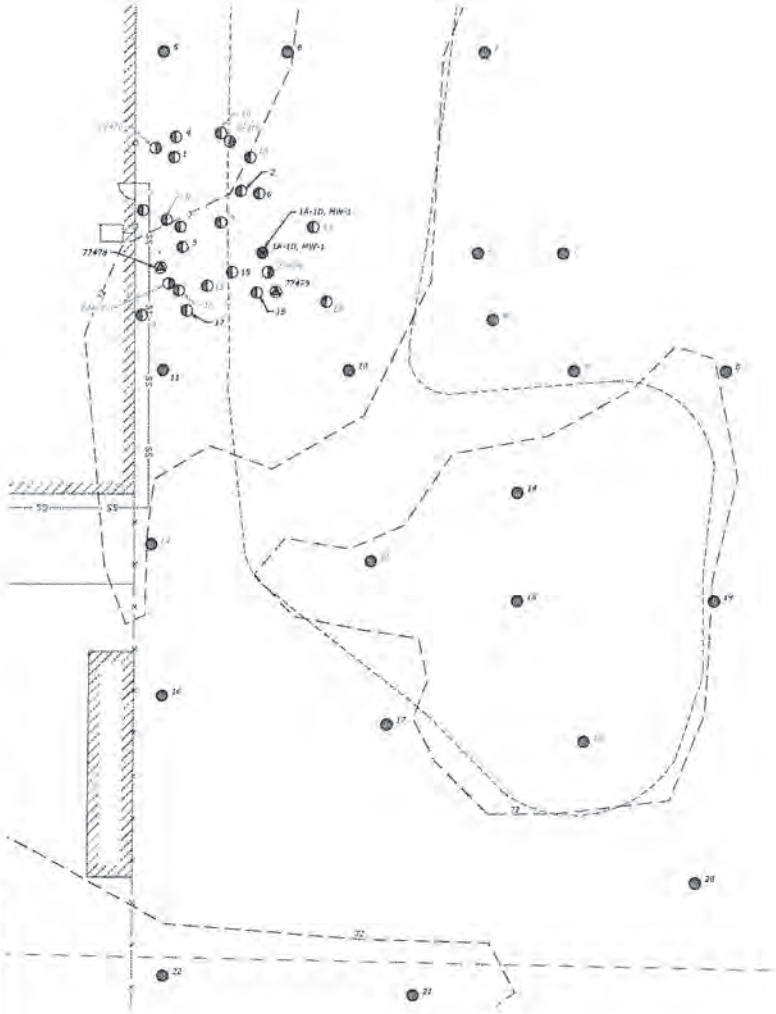
TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
1	1A (.75') 1B (2') 1C (5') 1D (10')	HO-ND, CD-ND, PB-105 HO-ND, CD-ND, PB-1.2 HO-ND, CD-ND, PB-1.13 CD-ND, PB-ND
[illegible]	2A (.5')	CD-ND, PB-222
[illegible]	3A (.5')	CD-ND, PB-225
[illegible]	4A (.5')	CD-3.2, PB-3835
5	5A (.5')	HO-ND, CD-ND, PB-113
6	6A (.5')	CD-ND, PB-33.6
7	7A (.5')	CD-ND, PB-27.4
8	8A (.5')	CD-ND, PB-6.65
[illegible]	9A (.5')	CD-10.6, PB-4140
10	10A (.5')	HO-950, CD-ND, PB-107
11	11A (.5')	HO-ND, CD-ND, PB-69.3
[illegible]	12A (.5')	CD-ND, PB-420
[illegible]	13A (.5')	CD-ND, PB-290
14	14A (.5')	CD-ND, PB-110
15	15A (1.0')	CD-ND, PB-25.9
16	16A (1.0')	HO-ND, CD-ND, PB-27.1
17	17A (1.0')	HO-ND, CD-ND, PB-117
[illegible]	18A (1.0')	HO-1500, CD-ND, PB-68.3
19	19A (.5')	CD-ND, PB-105
20	20A (.5')	CD-ND, PB-9.68
21	21A (.5')	CD-ND, PB-5.29
22	22A (.5')	CD-ND, PB-10.9

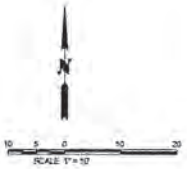
NOTES:
SURFACE WATER AND GROUND WATER SAMPLES DID NOT EXCEED MTCA CULS FOR THE TESTED CULS.

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:	052019006
SITE ADDRESS:	16008 60TH ST E
SITE AREA:	68,041 SF (1.56 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
3600 BRIDGEPORT WAY W, STE B3
LAKEWOOD, WA 98499
TEL: 253-301-4157

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

NO.	DESCRIPTION	INIT.	DATE

LAKEWOOD OFFICE
3600 Bridgeport Way W, B3
Lakewood, WA 98499
Phone: 253-301-4157
Fax: 253-396-3950

SEATTLE OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
Phone: 425-392-0055
Fax: 425-392-0056

BEYLER CONSULTING
Plan. Design. Manage

SAMPLE DATA - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 5

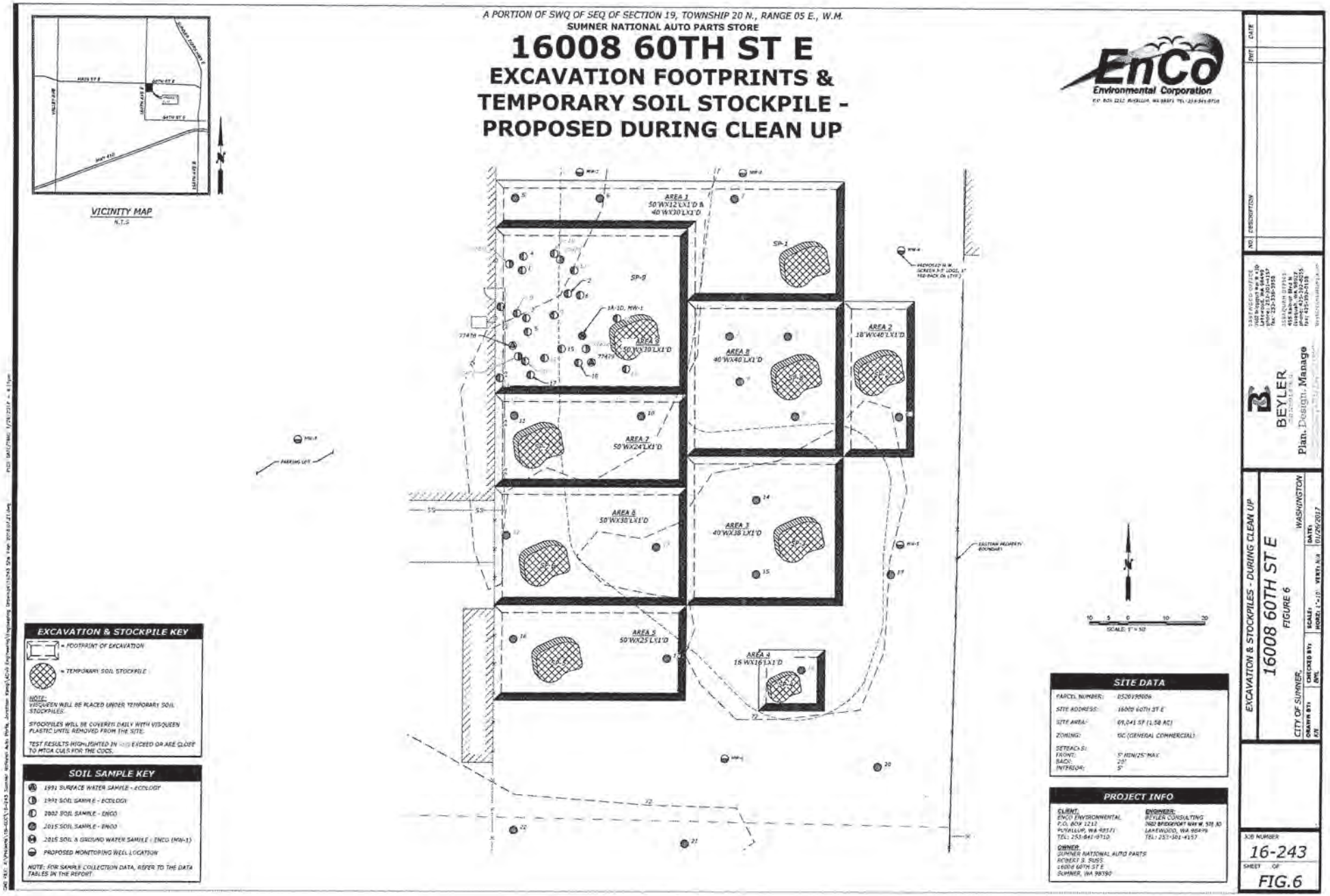
CITY OF SUMNER, WASHINGTON

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
JDS	BRL	HORZ: 1"=10' VERT: N/A	08/09/2016

JOB NUMBER 16-243

SHEET FIG.5 OF

Figure 4


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
EnCo
Environmental Corporation
VICINITY MAP
N.T.S
AREA 1
50'WX12'LX1'D &
40'WX30'LX1'D
AREA 2
18'WX40'LX1'D
AREA 3
40'WX38'LX1'D
AREA 4
16'WX16'LX1'D
AREA 5
50'WX25'LX1'D
AREA 6
50'WX30'LX1'D
AREA 7
50'WX24'LX1'D
AREA 8
40'WX40'LX1'D
AREA 9
50'WX30'LX1'D
SP-1
SP-9
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 EXCEED OR ARE CLOSE TO MTCA 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
ENGINEER:
BEYLER CONSULTING
LAKEWOOD, WA 98499
TEL: 253-381-4157
OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390
BEYLER
Plan. Design. Manage
EXCAVATION & STOCKPILES - DURING CLEAN UP
16008 60TH ST E
FIGURE 6
CITY OF SUMNER, WASHINGTON
DATE: 01/26/2017
JOB NUMBER
16-243
SHEET OF
FIG.6

Enclosure B

Email Correspondence

From: Mullin, Tim (ECY)
To: "Jonathan Kemp"
Subject: RE: EnCo and Sumner National Parts Work Plan Update
Date: Tuesday, June 27, 2017 4:12:00 PM

Yes, please proceed following the work plan and addressing additional items presented in my email dated 6/27/17.

Of note, I do not anticipate any material changes to my comments based on review and finalization of the draft opinion. Additionally, I do not anticipate being present for any split sampling during the excavation (same as I indicated during the January 2017 Site visit).

Thank you,
Tim

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Tuesday, June 27, 2017 4:08 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: RE: EnCo and Sumner National Parts Work Plan Update

Hi Tim:

Thanks for the update.

Just want to be sure: So we can proceed with the cleanup so long as we follow the Work Plan that you now have along with addressing the items presented by you in today's email?

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com

EnCo Environmental Corporation

www.encoec.com
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From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Tuesday, June 27, 2017 1:40 PM
To: Jonathan Kemp
Subject: RE: EnCo and Sumner National Parts Work Plan Update

Hi Jonathan:

I am finalizing an opinion for SW1547. Given Ecology's current review cycle timelines and the potential government shutdown, there is no way this opinion would be delivered in a timely fashion to be able to target July-September for the excavation. The need for the specific excavation time frame is to ensure groundwater is at the seasonal minimum and so the potential for infiltrating groundwater won't complicate the excavation.

Based on the need for implementing the work plan during the summer months, in general, Ecology concurs with the interim remedial action work plan and feasibility study. A lot of the field work is going to rely on field screening and the judgmental sampling in order to horizontally delineate soil contamination and confirm removal of soil contamination at depth. I think the work plan has sufficient contingencies to address potential unexpected pockets of contamination.

Here are some of my thoughts. I bolded what I consider critical items. This is not a complete list from the opinion letter, but should be sufficient to implement the work plan. Please take a look at these and let me know if you have any questions.

1. Overall, Ecology concurs with the interim remedial action proposed and the feasibility study. Ecology concurs that excavation is the cleanup strategy with the highest probability of contamination removal and meeting the MTCA Method A and Method B cleanup levels proposed. Standard points of compliance for achieving those cleanup levels in soil and groundwater are anticipated to be used for the Site.

2. Ecology has the following comments. These comments may slightly alter the final version of the workplan, but should not alter any field operations. Field work for the proposed excavation and well installation can proceed upon receipt of this opinion letter.
   a. **Where field screening or visual observations indicate contaminated soils, ethylene glycol (antifreeze) should be added to the Site COC list.**
      i. **Sample for ethylene glycol where staining of Site soils indicate a potential release of antifreeze and/or where sampling of Site soils are sampled for total petroleum hydrocarbons (TPH) and/or volatile organic compounds (VOCs). Ethylene glycol has a MTCA Method B cleanup value in soil for unrestricted land use of 160,000 milligrams per kilogram.**
      ii. **Ecology recommends sampling soil stockpiles as needed for ethylene glycol as well.**
      iii. **Groundwater should also be sampled for ethylene glycol. The MTCA Method B cleanup value for ethylene glycol in groundwater is 16,000 µg/L.**

   b. Ecology concurs with the work plan contingencies in that additional soil may require removal and off-Site disposal depending on the laboratory analytical results. Ecology encourages the removal of soil as dictated by the laboratory results in order to cleanup Site contamination.

c. Ecology agrees with the decision to complete the excavation at the anticipated seasonal minimum at the Site for groundwater (July-September).

d. It appears that additional information requested by Ecology via email correspondence dated January 27, 2017 has been incorporated into the work plan. A copy of this correspondence is included as Enclosure B.

e. Ecology concurs with landfill disposal of contaminated Site soils.

f. Ecology concurs with sampling of gravels placed on Site after cleanup at the Site had started for selected COCs in order to verify that the gravel stockpile is not contaminated.

g. **Where field screening or visual observations indicate contamination is likely to be present outside of Area 9, soil sampling may need to be adjusted to a broader scope of COCs (e.g., similar to the list proposed for Area 9). If there is any question whether or not additional analytical results should be obtained at a given sample location, Ecology recommends collecting the additional data.**

h. Ecology notes that the appropriate local permitting applicable to the interim remedial action and evaluation under the State Environmental Policy Act (SEPA) appears to have been completed.

i. Ecology concurs that implementation of the remedial action outlined in the work plan will likely result in aeral and vertical delineation of Site soils per WAC 173-340-350(7)(iii)(C), and provide acceptable contingencies in case contamination is more widely distributed than anticipated.

j. Site topography is relatively flat. Local topography gently decreases to the north and northwest, towards the nearest surface water body, Salmon Creek, located approximately 2,200 feet to the north. Ecology concurs with the monitoring well network as proposed. However, should analytical results or groundwater flow direction indicate additional monitoring wells are necessary, delineate the Site per WAC 173-340-350(7)(iii)(C).

k. **After monitoring well installation, Ecology recommends waiting at least two weeks before sampling the monitoring wells in order to ensure a representative sample. The reasons for this is because metals are a Site contaminant of concern (COC) and results may be influenced by suspended particles in the water column within the well after drilling.**

i. Ecology recommends using low flow groundwater sampling methodology.

ii. For metals in groundwater, Ecology recommends sampling for both total and dissolved metals.

l. Ecology understands that final monitoring well locations may be adjusted depending upon utility conflicts.

m. Ecology concurs with the proposals for local surveying of soil sample locations and professional surveying of the monitoring well locations.

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Tuesday, June 27, 2017 12:53 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: EnCo and Sumner National Parts Work Plan Update

Good Day Tim:

Update please on the Sumner National Auto Parts Work Plan review.

We are wanting to wrap up the Work Plan so that I can start getting my contractor scheduled in for July or August of this summer.

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com

EnCo Environmental Corporation

www.encoec.com
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From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Friday, June 16, 2017 9:54 AM
To: Jonathan Kemp
Subject: RE: EnCo and Sumner National Parts

Hi Jonathan:

For SW1547 interim action work plan review, I currently plan to review the report and draft work plan comments towards the end of next week.

Thanks,
Tim

From:	Mullin, Tim (ECY)
To:	Jonathan Kemp
Subject:	RE: EnCo and Sumner National Parts
Date:	Friday, January 27, 2017 9:01:00 AM
Attachments:	SW1547 WP text.docx SW1547 - metals.xlsx

Hi Jonathan:

Please see attached for my recommendations regarding the COCs and work plan text for VCP Site #SW1547, 16008 60th Street East, Sumner, WA. I have provided my recommendations for the work plan text as well as the COC list for soil and groundwater.

My thinking is that there is useful historical soil data, but I think it is important to analyze soil and groundwater for historical analytes in order to demonstrate protection of human health and the environment at the excavation extent. COCs vary from area to area, and a lot will have to be determined by field screening.

Final COCs on a per monitoring well list cannot be completely known at this time, as much depends on the excavation results, and only one groundwater sampling event has been completed at the Site. Establishing final cleanup levels for the Site also are dependent upon the excavation results, though MTCA Method A or B cleanup levels are used to determine the extent of excavation.

I agree that groundwater sampling should start with the full COC list at MW-1, and then develop a target COC list for the other monitoring wells. Hopefully the October 2015 event results are consistent going forward. Though even non detect constituents at MW-1 should be sampled at the downgradient well as a point of compliance to show that these concentrations are not going offsite. Sampling of the downgradient well would not be required until after a determination of which is the Site downgradient monitoring well.

Other thoughts I have regarding the work plan:

- Did (or will) the City of Sumner require (or complete) a SEPA determination for the excavation as part of the grading permit?
- If the gravel apron is set aside prior to excavation, I recommend removing the shallowest estimate of emplaced thickness (~4"), and sampling the gravel pile for Site COCs in soil to demonstrate it is uncontaminated. However, if the gravel pile is incorporated into the stockpiles and sampling program shown on Figure 6, then no additional sampling is recommended.
- Based on the historical sampling data, I anticipate stockpiles for areas/cells 6, 7, 8, and 9, will require off-Site transport and disposal.
- The total cubic yards of excavation and disposal may exceed the original estimate, though it appears in the work plan this contingency is anticipated.
- The final monitoring well locations will be dependent upon excavation results, as well as resolution of infrastructural and utility conflicts.
- To the extent possible, I think it is important that the excavation report for the Site address

the RI/FS/CAP components of the cleanup process under MTCA, though this does not need to be addressed as part of the work plan.

Please give me a call if you have any questions.

Thank you,
Tim

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
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Mullin, Tim (ECY)
Sent: Wednesday, January 25, 2017 9:54 AM
To: 'Jonathan Kemp' <jkemp@encoec.com>
Subject: RE: EnCo and Sumner National Parts

Thanks for the below; I have the COC review scheduled for tomorrow, 1/26/17

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Monday, January 23, 2017 2:12 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: RE: EnCo and Sumner National Parts

Hi Tim:

RE: Ecology VCP Work Plan Review
Sumner National Auto Parts
16008 60th Street East, Sumner WA 98390
Ecology VCP ID: SW1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304

Thanks for the update Tim.

I have incorporated the addition of 6 more groundwater monitoring wells into the forthcoming Work

Plan, at your request.

Regarding the Method B CULs for constituents that do not have Method A CULs;

Based on the 1991 Site Hazard Assessment rating I was able to find the following contaminants on the "*List of Substances to be considered for scaling*" on the Worksheet pages 1 through 6:

Arsenic
Barium
Chromium
Cadmium
Lead
PCE
Xylenes

Question 1: Could you please give me the specific list of metals that Ecology will require to be tested on selected soil and groundwater samples. I want to be sure we get this correct the first time.

Question 2: Listed below is my first attempt at presenting the COCs for the project site: Please review this paragraph and make needed changes or clarifications:

"The chemical or contaminant compounds or elements of concern listed below are collectively referred herein as the COCs. One or more of these COCs will be tested on the collected samples; depending on the test results obtained during the cleanup action. At a minimum, the full suite of the below-listed COCs will be analyzed on two (2) soil samples that report the highest concentrations of lead, cadmium, and petroleum hydrocarbons (project site indicators).

The full suite of the below-listed COCs for groundwater will be analyzed at **MW-1**. Based on the laboratory test result collected from **MW-1**, additional COCs may be added to the testing list for the other monitoring wells.

- Diesel range organics (DRO) as total petroleum hydrocarbons (soil & groundwater)
- Gasoline range organics (GRO) total petroleum hydrocarbons (soil & groundwater)
- Oil range organics (ORO) as total petroleum hydrocarbons (soil & groundwater)
- Volatile organic compounds (VOC) to include acetone, benzene, 2-butanone, carbon disulfide, ethylbenzene, methylene chloride, 4-methyl-2pentanone, tetrachloroethene, toluene, EDB, EDC, MTBE, total xylenes, n-hexane, and other halogenated hydrocarbons (soil & groundwater)
- Polyaromatic hydrocarbons (carcinogenic) – (soil & groundwater)
- Naphthalenes (soil & groundwater)
- Polychlorinated biphenyls (PCBs) mixtures (total) (soil)
- Total arsenic, barium, cadmium, tri-valent chromium, hexa-valent chromium, lead (soil & groundwater)
- Dissolved (filtered) arsenic, barium, cadmium, tri-valent chromium, hexa-valent chromium, and

lead (groundwater)"

Jonathan Kemp, Principal

EnCo Environmental Corporation

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Monday, January 23, 2017 7:49 AM
To: Jonathan Kemp
Subject: RE: EnCo and Well Map

Good morning Jonathan:

Please see the attached proposed approximate location sketch for the monitoring wells. The proposed monitoring well network presumes all soil contamination will be removed by excavation and that the results at MW-1 showing no exceedances of cleanup levels for groundwater continue. The monitoring well network also presumes that groundwater flow direction will be to the north, following topography and towards the nearest surface water. Exceedance of a cleanup level in groundwater at any monitoring well during future groundwater sampling may require delineation via installation of additional monitoring wells.

Monitoring wells are proposed to be installed outside the excavation perimeter after the excavation is complete. Based on the results of compliant groundwater monitoring thus far at MW-1, well construction can be similar to this one. However, if field conditions indicate that a given well location should be deeper than MW-1, have a 10 foot screen instead of a five foot screen, or be installed with a 2" (or greater) diameter casing, those options are available. Well installation should continue to be installed per WAC 173-160.

Regarding the Method B cleanup levels – these should be applied to any contaminant of concern which does not have a Method A cleanup level. Barium in soil is an example of where a Method B cleanup level should be used, but there are others (e.g., silver). Method B cleanup levels can be calculated under MTCA on a site-specific basis, however, standard assumptions can be made and the Method B cleanup levels from the CLARC database tables can be used. From my experience, I suggest using the most stringent Method B value from the CLARC database table instead of calculating a site-specific value, as the difference in values will frequently be negligible and using the database value is quicker and cheaper.

Here is a link to the CLARC database values:
https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx

Thank you,
Tim

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
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Jonathan Kemp [mailto:jkemp@encoec.com]
Sent: Wednesday, January 18, 2017 9:28 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: EnCo and Well Map

Hi Tim:

RE: Ecology VCP Work Plan Review
Sumner National Auto Parts
16008 60th Street East, Sumner WA 98390
Ecology VCP ID: SW1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304

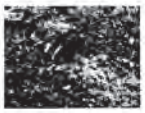
I have made all of the corrections, additions, updates to the Cleanup Action Plan that we talked about during your site visit on January 9, 2017. Once I get the following clarifications I will proceed to finish up the Cleanup Action Plan and get it to you for review.

1. Number of Monitoring Wells needed and the Approximate Location Sketch for the wells
2. Confirm that the MTCA Method "B" CULs will be used only for Barium.

Note: I am not too familiar with calculating the Method B CULs so if you could provide me with the CUL calculations needed for Barium in soil that would be a great help.

Jonathan Kemp, Principal

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371
Work: 253-841-9710
Email: jkemp@encoec.com



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INDEPENDENT REMEDIAL ACTION WORK PLAN

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

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:

EnCo Environmental Corporation
P.O. Box 1212
Puyallup WA 98371

Signature of Preparer: _____

Job # E3JK-Sumner-Auto-Parts-3

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EnCo
Environmental Corporation

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TABLE 3	Analytical Methods, MDLs, Containers, Preservatives, & Holding Times – Water

In Appendix B

TABLE 4A	Surface Water Test Results – 1991 Ecology Assessment
TABLE 4B	Soil Test Results – 1991 Ecology Assessment
TABLE 5	Soil Test Results – 2002 EnCo Assessment
TABLE 6A	Soil Test Results – 2015 EnCo Assessment
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APPENDIX C SUPPORT DOCUMENTS

Ecology Voluntary Cleanup Program, Agreement Form
Ecology Voluntary Cleanup Program, Application Form
Holocene Drilling, Inc. Daily Direct Push Drilling Log
Log of Soil Samples & Monitoring Well Details (MW-1)
Pierce County Assessor & Treasurer Parcel Data Sheets
City of Sumner Commercial & Industrial Application & Permit (Forthcoming)
TPCHD Waste Disposal Authorization Application & Permit (Forthcoming)
Example Soil Sample Field Data Form
Example Groundwater Well / Piezometer Sample Field Data Form
Resumes of Key Personnel

APPENDIX D LABORATORY TEST REPORTS – EnCo 2015

Laboratory Test Reports & Chain-of-Custody Forms - 2015

EnCo
Environmental Corporation

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

INDEPENDENT REMEDIAL ACTION WORK PLAN

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

1.0 INTRODUCTION

EnCo Environmental Corporation (EnCo) has been retained by Mr. Robert A. Suss Jr. of Sumner National Auto Parts, Inc. to prepare an **Independent Remedial Action Work Plan** (Work Plan) for a forthcoming cleanup action on the above-referenced property, herein referenced as the project site. The project site is located in the City of Sumner as depicted on **FIGURE 1, VICINITY (APPENDIX A)**.

2.0 BACKGROUND

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 these documents in their entirety in order to become familiar with the work that has been completed.

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 – ASSESSMENTS BEFORE CLEANUP**.

1. Washington 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 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 – APPENDIX B**. Copies of the laboratory test reports and Chain-of-Custody forms are presented in **APPENDIX D – LABORATORY TEST REPORTS – EnCo 2015**

4. The third assessment consisted of collecting 25 near surface soils and 1 groundwater sample. This assessment extended north, east, and south of the 2002 near surface soil assessment. This third assessment was performed in the field by EnCo in October and again in December 2015. The media sample location diagram, groundwater well details, laboratory test result tables, laboratory test reports, and chain of custody forms for the 2015 assessment are presented in this Work Plan. A summary of the laboratory test data for samples collected in 2015 is presented in **TABLE 6A – Soil & 6B – Groundwater (APPENDIX B)**.

3.0 PURPOSE, OBJECTIVE & GOAL

The purpose for preparing this Work Plan is to document and specify the Quality Assurance and Quality Control (QA/QC) procedures that will be followed to ensure that assessment methods, cleanup techniques, sample collection, field screening methods, and laboratory analysis will result in data of sufficient quality to evaluate soil and groundwater quality at the areas of concern on the project site.

The objective of this Work Plan would be to determine whether implementation of this document will be sufficient to meet the substantive requirements of the Washington Model Toxic Control Act (MTCA) and its implementing regulations for Chemicals of Concern (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 Washington Department of Ecology (Ecology).

4.0 SCOPE OF WORK

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

1. Submit this DRAFT Work Plan to Ecology for review. Obtain approval of this DRAFT Work Plan (with possible amendments) from Ecology.

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

3. 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.

4. Install a 6 foot high, metal, chain-linked security fence with swing open gate along the northern extent of the existing building with lock and key access.

5. Collect up to 43 randomly and judgmentally selected discrete soil samples as depicted (proposed) on **FIGURE 7 – SOIL & GROUNDWATER SAMPLE TEST RESULTS – PROPOSED CONFIRMATORY AFTER CLEANUP**. Additional soil samples may be collected based on the work in progress and on the progress made during the cleanup action. 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). Samples may need to be collected deeper than 2.0 feet bgs depending on field screening tests, observation, olfactory evidence, and accredited laboratory test results.

6. Collect 1 background soil sample. The background soil sample will be collected for the purpose of establishing an on-site background soil quality control check.

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

8. Collect 1 groundwater sample from the existing monitoring well (**MW-1**). Measurements will be taken from the top of the ground-level monument to the top of the casing, from the top of the casing at the north rim to the static water level, and from the top of the well casing to the bottom of the 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.

9. Submit the media samples to a Washington State accredited testing laboratory under Chain-of-Custody procedures for analysis of selected COCs as presented in **SECTION 12.0**.

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

11. Scarify, excavate, load, transport, dispose, and manifest an estimated 117 cubic yards (**171 Tons)** of petroleum hydrocarbon and heavy metal contaminated soil from the areas of concern depicted on **FIGURE 5 – SOIL & GROUNDWATER SAMPLE TEST RESULTS – ASSESSMENTS BEFORE CLEANUP**. The contaminated soil will be disposed of at a licensed, off-site, disposal facility (Pierce County Landfill – LRI). The volume of contaminated soil was estimated by not exceeding 2.0 feet below ground surface at selected areas of concern on the project site. The estimated volume of impacted soil may increase or decrease depending on compliance and confirmatory laboratory test results obtained during the cleanup action at known areas of concern and/or if additional areas of concern are identified during the work effort.

12. Collect representative confirmatory soil samples on the bottom of excavations to determine if clean limits have been attained. If clean limits have not been obtained scarify additional volumes of soil until clean limits have been attained.

13. Store the scarified and excavated contaminated soil in covered temporary stockpiles on the premises. Visqueen sheets will be placed over the tops and sides of each temporary soil stockpile at the end of each working day.

14. Collect the appropriate number of soil samples from the stockpiles to determine disposal options according to agency guidelines. Collect a composite soil sample from beneath temporary soil stockpiles that are placed on top of bare soil after the piles have been removed for off-site disposal. Soil from stockpiles that do not exceed MTCA CULs will be left on the premises and will be used as backfill.

15. Prepare an electronic version (.pdf format) of 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" CULs, field screening readings, safety guidelines, field procedures, to-scale diagrams with sample locations and excavation footprints, laboratory reports, Chain-of-Custody forms, conclusions, and recommendations.

16. Submit the report to Ecology for review, comment, and request for a No Further Action opinion letter.

5.0 METHODOLOGY

The proposed cleanup will be a voluntary action undertaken by the property owner and will be performed without order or decree by Ecology. The work will enter into the State's Voluntary Cleanup Program (VCP) and will be completed without direct field oversight by Ecology. The VCP forms are attached in **APPENDIX C – SUPPORT DOCUMENTS**.

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

The cleanup action will follow the substantive requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC for characterizing the identified contaminant releases and remediating these releases by using source removal and off-site disposal for the cleanup. Sampling and analysis procedures will follow the guidelines as presented in MTCA Chapter 173-340-820 WAC, Sampling and Analysis Plans. Media samples will be collected in accordance with WAC 173-340-410 – Compliance Monitoring Requirements and will address the protection of human health and safety, performance monitoring, and confirmational monitoring.

6.0 SAFETY & HEALTH

6.1 Personal Safety

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.

EnCo personnel will be fitted with personal protection safety equipment meeting the minimum requirements for Safely Level D. Safety Level D personal protection safety equipment will include protective overalls or impermeable suits, rubber/steel shanked boots, hard hat, safety glasses, Nitrile, Latex, and PVC gloves, and hearing protection. EnCo will prepare an abbreviated Site Safety and Health Plan specific to the project prior to field work. EnCo will make available the Site Safety and Health Plan to contractors directly involved with the cleanup action. EnCo will not, however, be responsible for providing personal protection safety equipment or providing oversight to any heavy equipment operator's safety and health to any outside contractors or operators of heavy equipment or field personnel used during the cleanup action.

The landowner will provide access to the project site and information pertaining to known or suspected hazardous and toxic substances on the property. This knowledge was obtained by reviewing previous site investigations, assessments, and interim remedial actions performed by other professionals.

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, remedial 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 performing field work. Safety Level D personal protection safety equipment will include protective heavy overalls or zippered impermeable suits, rubber-lined, steel-shanked boots, hard hat, splash protection, safety glasses, nitrile, latex, and/or PVC gloves, and ear/hearing protection.

The required elements for protection monitoring for EnCo personnel will be presented in an abbreviated Health and Safety Plan. The Health and Safety Plan will be specific to project conditions prior to any field work and will meet the guidelines as presented in Chapter 296-62 WAC. EnCo will not be responsible for providing personal protective safety equipment and will not provide safety and health oversight for any outside contractors and operators of heavy equipment used during the investigation. EnCo however will make known to the field manager of independent contractors and heavy equipment operators of the COCs that are more than likely to occur on the project site as specified in this Work Plan.

6.2 Utility Safety

Public and private subsurface utility location firms will deem safe the areas on the project site to be cleaned up prior to initiating any work. 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.

6.3 Best Management Practices

Best Management Practices will be implemented on the project site for the cleanup action. Civil engineering plans, listed below, will be prepared for this project.

1. Fill & Grade
2. Erosion Control
3. Road and Storm Detail
4. Storm Report

7.0 SITE SECURITY

A 6 foot high, metal, chain-linked security fence with swing open gate will be installed along the northern extent of the existing building. 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.

8.0 SCHEDULE

It is anticipated that this project will be initiated during the month of August 2016, weather permitting and provided that all required permits are obtained and that this Work Plan, or an amended version, has been approved by Ecology. The client will be contacted at least 5 days prior to any field work.

The cleanup action, as presented in the **SCOPE OF WORK**, should take about five 8-hour work days to complete. Laboratory reports take about ten working days to complete from the date of sample submittal. A draft cleanup action report will be completed within approximately 45 working days following receipt of the last set of laboratory test results. This draft report will be submitted to Ecology for review. The review process at Ecology will more than likely be at least 30 days.

9.0 KEY PERSONNEL

9.1 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, and cleanup action. Mr. Kemp has a minimum of 48 hours of hazardous materials, safety, and health training.

9.2 Licensing & Certification

Documents submitted under the VCP program that contain geologic, hydrogeologic, or engineering work must be 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.

It is the opinion of this writer that the proposed near surface soil cleanup action at the project site will not require geologic, hydrogeologic, or engineering design or interpretation. The reported soil contamination documented in three separate assessments is within a few feet of the ground surface and groundwater collected from **MW-1** was not impacted with the COC. Therefore the cleanup action will not be reviewed and stamped by a State Certified Geologist, Licensed Professional Engineer, or a Licensed Hydrogeologist.

A certified professional land surveyor will not be used for this project. Measurement of sample locations, excavation footprints, temporary soil stockpiles, and site features will be made with a laser distance meter that has a 0.1 foot accuracy level.

10.0 DESCRIPTION AND LAND USE

10.1 Project Site Current Land Use

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 as depicted on **FIGURE 1 – VICINITY** and **FIGURE 2 – PARCEL & AERIAL**. A current site plan is presented as **FIGURE 3 – SITE PLAN – BEFORE CLEANUP**.

The 1.58-acre section of land is located within the jurisdictional boundary of the City of Sumner in Pierce County and the county tax parcel number is 0520198006. 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 within the City limits of Sumner.

The project site is currently occupied by one store/warehouse/office building that is currently occupied by a retail automobile parts supply company (Sumner National Auto Parts) as depicted on **FIGURE 2 – PARCEL & AERIAL**. Sumner National Auto Parts has 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. 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. This area is covered with grass, crushed rock, and unsorted sandy gravels. The crushed rock / sandy gravel covered area located south of the building is used as a storage lot for parts, vehicles, and equipment.

The future land use for the project site is currently unknown.

10.2 Topography, Elevation, and Drainage

The overall topography east of the building is level with variable slopes less than 1 percent in a south 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 65 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 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 the pervious, 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. There are no drainage corridors or ditches within a few hundred feet of the property. 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.

10.3 Regional and 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 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. In general, contamination plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

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

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.

Log of Soil Samples & Monitoring Well Details for MW-1 – October 2015

According to the limited site assessment performed by EnCo in October 2015 the soils encountered during the installation of **MW-1** consists of inorganic silt loam with a mixture of irregular cobbles (ML) from the ground surface down to about 1 foot bgs underlain with poorly graded (rounded and irregular) sandy gravel (GP) from about 1 foot bgs down to about 4 feet bgs. From about 4 feet bgs down to about 10 feet bgs the soil consists of brown to grey, well sorted, medium sand (SW).

10.4 Local Groundwater Setting

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 information obtained from the City of Sumner there are no drinking water wells 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 personnel from the TPCHD the project site 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 project site may flow in a northeasterly 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.

Groundwater Monitoring Well

One groundwater monitoring well (**MW-1**) was installed on the project site on October 30, 2015. The well was placed in the area just east of the former concrete slab that was positioned along the east wall of the building. 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 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 consisted 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 well screen was installed at the bottom of the probehole; affixed with an end cap that acts like a well sump. Attached to the top of the pre-pack well screen and extending into the flush-mounted well

monument at the ground surface was a 1-inch, nominal-diameter, solid stem, riser PVC pipe. The **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 was used to determine how much water was purged out from the well prior to sampling.

At least 4 volumes of standing water was 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 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.

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.

Public Water Wells

According to the landowner there are no private drinking water supply wells located on the project site.

10.5 Contiguous Property Current Land Use

A brief description of the current land use activities as observed on contiguous property (streets are not included) is presented in **TABLE 1**.

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

11.0 PERMITS

The following permits will be required for this project:

- Tacoma Pierce County Health Department Waste Disposal Authorization Permit to allow the contaminated soil to be disposed of at the Land Recovery, Inc. landfill in Graham.
- City of Sumner Commercial & Industrial Permit for Fill & Grade, Erosion Control, Road & Storm Detail, and Storm Report for the cleanup action.
- Probehole Monitoring Well Start Card (ECOLOGY). A Start Card in not required since **MW-1** was installed at a depth less than 10 feet bgs.

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

12.0 CHEMICALS OF CONCERN

The compounds or elements listed below are collectively referred herein as the COCs. One or more of these COCs will be tested on collected samples as indicated below.

- Diesel range organics (DRO) and oil range organics (ORO); total petroleum hydrocarbons (soil and groundwater)
- Volatile organic compounds (VOC) to include benzene, ethylbenzene, toluene, total xylenes, and chlorinated hydrocarbons (soil and groundwater)
- Total arsenic, cadmium, chromium, and lead (soil and groundwater)
- Dissolved (filtered) arsenic, cadmium, chromium, and lead (groundwater)
- Toxicity Characteristic Leaching Procedure (TCLP) for cadmium and lead (soil)

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 limited groundwater water quality assessment.
- Chemicals 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.
- Observed contamination, olfactory evidence, stained soil, and/or petroleum hydrocarbon sheen.
- Test results required by the licensed disposal facility.

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 their applicable MTCA CUL for unrestricted land use as presented in **TABLE 6A (APPENDIX B)**.

For this reason test results for total cadmium and total lead were 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 test results of the total cadmium and total lead is presented below.

EnCo ID Number	Total Cd (mg/kg)	Total Pb (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 (Reported Dated December 22, 2015) for the TCLP Cd and TCLP Pb composite sample from the 5 discrete grab samples are presented below, listed in **TABLE 6B**, and are documented in the testing laboratory report presented in **APPENDIX C**.

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

13.0 FIELD PROCEDURES

Field procedures will follow acceptable industry practices. Site specific field procedures for sampling and testing protocols during the cleanup will be presented in the forthcoming cleanup action report.

13.1 Data Organization

Soil Sample Documentation

Soil sample documentation will occur prior to and immediately after collection. Sample locations will be labeled, dated, staked, or flagged on the day of sampling. Characteristics of each sample will be hand-written onto pre-printed **Soil Sample Field Data Form (APPENDIX C – SUPPORT DOCUMENTS)**. Sample collection forms contain 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.

Groundwater Sample Documentation

Groundwater sample documentation will occur prior to and immediately after collection. Characteristics of the collected groundwater sample from **MW-1** will be hand-written onto a **Groundwater Well / Piezometer Sample Field Data Form (APPENDIX C)**. This form contains specialized information pertaining to well security, equipment calibration, static water levels, sample appearance, immiscible layers, pumping or purging and 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.

13.2 Sample Identification Number

Samples will be designated with a unique number using the following format:

SNA – 1A – 1- SO – 1' where:

SNA = Sumner National Auto Parts
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

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

13.3 Sample Media

Soil

Discrete soil grab samples will be collected for selected COCs to vertically and horizontally assess near surface soil quality at the identified areas on concern on the project site. Composite soil samples will be collected from the temporary soil stockpiles to determine off-site disposal options. 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.

Groundwater

One discrete groundwater sample will be collected and analyzed for COCs to assess groundwater quality from **MW-1**. No other groundwater samples will be collected on the project site.

13.4 Sample Locations

Randomly and judgmentally selected soil samples and one groundwater sample (**MW-1**) will be collected on the project site. The placement and number of soil samples to be collected after the cleanup action was determined by a combination of many factors as listed below.

Soil Sample Locations

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

    1. Results from the ECOLOGY – 1991 surface soil and pooled surface water quality assessment.

       1991 soil locations to be sampled after cleanup: **77474, 77475, 77476, & 77477** (Figure Symbol)

    2. Results from the EnCo – 2002 near surface soil quality assessment.

       2002 soil locations to be sampled after cleanup: **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.

       2015 soil locations to be sampled after cleanup: **2, 3, 4, 9, 12, & 13** (Figure Symbol)

- Knowledge of current and past land use activities such as where chemicals and solvents were used, stored, or spilled such as in waste storage areas, vehicle repair and storage areas, hulks, junk piles, at the edge of impervious surfaces, loading docks, adjacent to entry doors, etc.

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

- Reported soil texture, strata, and characteristics

- Topography of the property such as, flat areas, terraces, steep slopes, depressions, low spots, swales, drainage ways, etc.

- From the 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.

Groundwater Sample Locations

One groundwater sample will be collected from **MW-1** (Figure Symbol:) after the cleanup action is completed.

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 subsurface utilities

2. Beneath or adjacent to foundations or other structures

3. Beneath buildings and roadways

4. Olfactory evidence

5. Observed readings from a PID volatile organic vapor monitoring instrument used for field screening ambient air and soil

6. Observed stains, hydrocarbons, and discolorations

13.5 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.
- At this time it is not anticipated that any regulatory agency or other authority will be on the project site or that splitting of third party media samples will be undertaken.
- The approximate size 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 samples collected from stockpiled excavated soil will follow the guidelines as listed below:

Cubic Yards of Soil Excavated	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**

13.6 Soil Sampling

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. Vertical and lateral (horizontal) confirmation soil samples will be collected from the bottom and selected side walls of cleanup action excavations. For large excavations that extend beyond 80 feet by 80 feet one bottom and four side wall samples will be collected. For smaller excavations one bottom and two side wall samples will be collected. For very small excavations less than 4 feet wide by 4 feet long by 2 feet deep only a bottom soil sample will be collected.

Soil samples collected from the base and sidewalls of excavation(s) that are less than four feet deep will be obtained by carefully entering into excavation(s) using stainless steel spoons, plastic syringes, and/or triers. If excavation depths exceed four feet deep soil samples will be collected from undisturbed soil in the backhoe bucket affixed to a track hoe.

Each sample will be obtained in accordance with appropriate sampling protocol including container type, packaging, preservation, holding time, and Chain-of-Custody procedures. 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, borosilicate glass jars affixed with Teflon-lined screw-top lids. The outside surface of each sample bottle will be wiped clean with a paper towel and placed into insulated plastic coolers filled with bagged cubed ice.

13.6.1 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 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 (tarred) 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.

13.6.2 Non-Volatile Compounds

Soil samples collected for non-volatile organic compounds such as heavy metals, cPAHs, DRO, and ORO will be collected by using clean stainless steel spoons or metal triers.

13.7 Groundwater Sampling

Groundwater measurements from **MW-1** 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 1/100th 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.

Samples will be carefully placed into clean, borosilicate glass jars affixed with Teflon-lined screw-top lids. The outside surface of each sample bottle will be wiped clean with a paper towel and placed into insulated plastic coolers filled with bagged cubed ice to keep the temperature of the samples at approximately 4 degrees Celsius. Samples will

be delivered in person or by common carrier to the accredited testing laboratory within the required holding time for each COC.

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.

13.8 Field Screening

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

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 cleanup report.

The highest observed PID readings will be recorded directly from the digital screen onto a field form. 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. The detection limit of the PID instrument is about 1 part per million. 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.

Monitoring volatile organic vapors in soils 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 media from detectable and volatile petroleum hydrocarbons such as benzene, ethylbenzene, toluene, and xylenes.

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 contaminants.

Monitoring volatile organic vapors in ambient air will be performed as part of the safety protocol for field workers and other persons located down wind of the cleanup action. Ambient air will be monitored in the breathing zone of the on-site EnCo workers. The excavation contractor 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, 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 excavation activities. Volatile organic vapor readings observed at background locations will be subtracted from the observed organic vapor readings taken at downwind locations.

14.0 MEASURING

Roadways, driveways, buildings, foundations, structures, utilities, existing monitoring well, media sample locations, excavation footprints, temporary soil stockpiles will not be professionally surveyed by a licensed land surveyor. Measurement of said features will be made with a laser distance meter that has a 0.1 foot accuracy level. Measured and plotted data depicted on all forthcoming figures should be considered accurate only to the degree permitted by the data sources and implied by the measuring methods.

15.0 LABORATORY & TEST METHODS

15.1 Certified Laboratory

Laboratory testing will be performed by a Washington state accredited laboratory such as Friedman & Bruya, Inc. of Seattle or other certified 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 certified testing laboratory. 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 cleanup report.

Analytical methods to be used will be sensitive enough to quantify each analyte at or below its cleanup action level, 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.

15.2 Test Methods

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

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

Chemicals of Concern	Lab Method Reference	MDL (undiluted) Unit: mg/Kg	Bottle Size & Type	Preservative	Holding Time
Petroleum Hydrocarbons					
Diesel Range Organics – TPH ($C_{10} – C_{25}$)	NWTPH – Dx / Dx Extended	50	4 oz. glass jar, wide mouth, Teflon-lined lid	Ice <4°C	14 Days
Oil Range Organics – TPH ($C_{25} – C_{36}$)	NWTPH – Dx / Dx Extended	250	4 oz. glass jar, wide mouth, Teflon-lined lid	Ice <4°C	14 Days
Volatile Organic Compounds					
Volatile Organic Compounds (Extended List)	SW 846-8010, 8240, 8260B, 8260C, 8011 or 5035A	Variable	40 mL glass Teflon septum-lid vials, pre-weighed, with spin bar	Ice <4°C for 48 Hours, Freeze to <-7°C	14 Days
Heavy Metals (Total)					
As, Cd, Cr, Pb	EPA 7420/6010/ 200.8	1.0 to 5.0	4 oz. glass jar, wide mouth	Ice <4°C	6 months
TCLP			4 oz. glass jar, wide mouth	Ice <4°C	6 months
Cd, Pb	EPA 200.8 40 CFR Part 261	1 mg/l	4 oz. glass jar, wide mouth	Ice <4°C	6 months
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	

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 the hand tools will be cleaned by scraping adhering soil from the tools and washing with a laboratory grade soap solution. 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. These procedures will be performed to reduce or eliminate the potential for cross contamination between sample locations. Cleaning fluids will be visually inspected after decontamination of sampling tools.

Waste Handling

The cleaning and decontamination fluids, down hole extracted soils, and probing wastes (investigation derived wastes) such as excess soils from probing and sampling, gloves, paper, bags, plastic pipe, etc. will be temporarily stored in a clean 20-gallon to 55-gallon, open-topped, bolted ring, metal DOT 17h drum. The drum fill date will be recorded and it will be labeled using a non-hazardous waste label. The drum will be stored in a secure place on the premises until the cleanup action is completed at which time the drummed waste will be incorporated into the contaminated soil for off-site treatment and disposal.

Generated wastewater and washwater from field sampling and decontaminating liquids and purged fluids from the monitoring well will be contained, handled, managed, and disposed of on the project site over a grassy surface away from the well head and in an area that will not affect surface water runoff. Liquid wastes will not be disposed of into catch basins or other drains.

17.0 CLEANUP ACTION

The method chosen for remediating reasonably accessible contaminated soil will be to scarify/excavate, store contaminated soil in temporarily stockpiles, provide protection monitoring, collect performance and confirmational samples, load, manifest, transport, and dispose of soils that exceed MTCA Method "A" CULs. Contaminated soil which exceeds MTCA CULs for the COCs will be disposed of at a licensed, off-site, disposal facility (LRI in Graham).

The heavy equipment operator will scarify/excavate and remove soil in 4-inch to 6-inch lifts from observed, field screened, or confirmed areas impacted with the COCs. Excavated soils will be placed in temporary soil stockpiles. If olfactory evidence, water sheen, petroleum staining, automobile parts, unusual color, 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 the temporary soil stockpiles. The proposed areas that will be scarified or excavated are depicted on **FIGURE 6 – EXCAVATION FOOTPRINTS & TEMPORARY SOIL STOCKPILES – PROPOSED DURING CLEANUP**.

After excavation, performance and confirmational soil samples will be collected for analysis of selected COCs. If certified laboratory test results from samples collected in the areas remediated confirm the presence of COCs above the MTCA "A" CULs an additional 4-inch to 6-inch thick layer of soil will be excavated out and placed into the temporary soil stockpiles.

Confirmatory soil samples will be collected from the bottom and sides of excavations, from the stockpiles, and from beneath stockpiles placed over bare ground to determine concentrations of selected COCs. The test results from the performance and confirmatory soil samples will be used to guide the cleanup action and to determine which soils need to be loaded and transported for off-site disposal.

Excavation will continue until certified test results confirm that the concentrations of COCs are below MTCA "A" 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, 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.

Weight Tickets or Bills of Lading slips will be obtained for each load of soil transported to the off-site 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 removed or damaged during the cleanup will not be replanted or replaced.

18.0 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 reported in soil at the indicated locations. Modifications to this Work Plan may be needed based on review by Ecology staff and encountered field conditions.

This draft Work Plan has been submitted to Ecology at the address listed below. Department staff will review the Work Plan and submit a letter with a decision or opinion to make amendments, changes, or clarifications.

Closing Statement

The information presented in this Work Plan may not absolutely define the lateral and vertical extent of soil contamination on the project site. Additional investigation may be needed to make such determinations which could include additional groundwater and soil 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 or site characterization is needed.

19.0 REFERENCES

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).

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

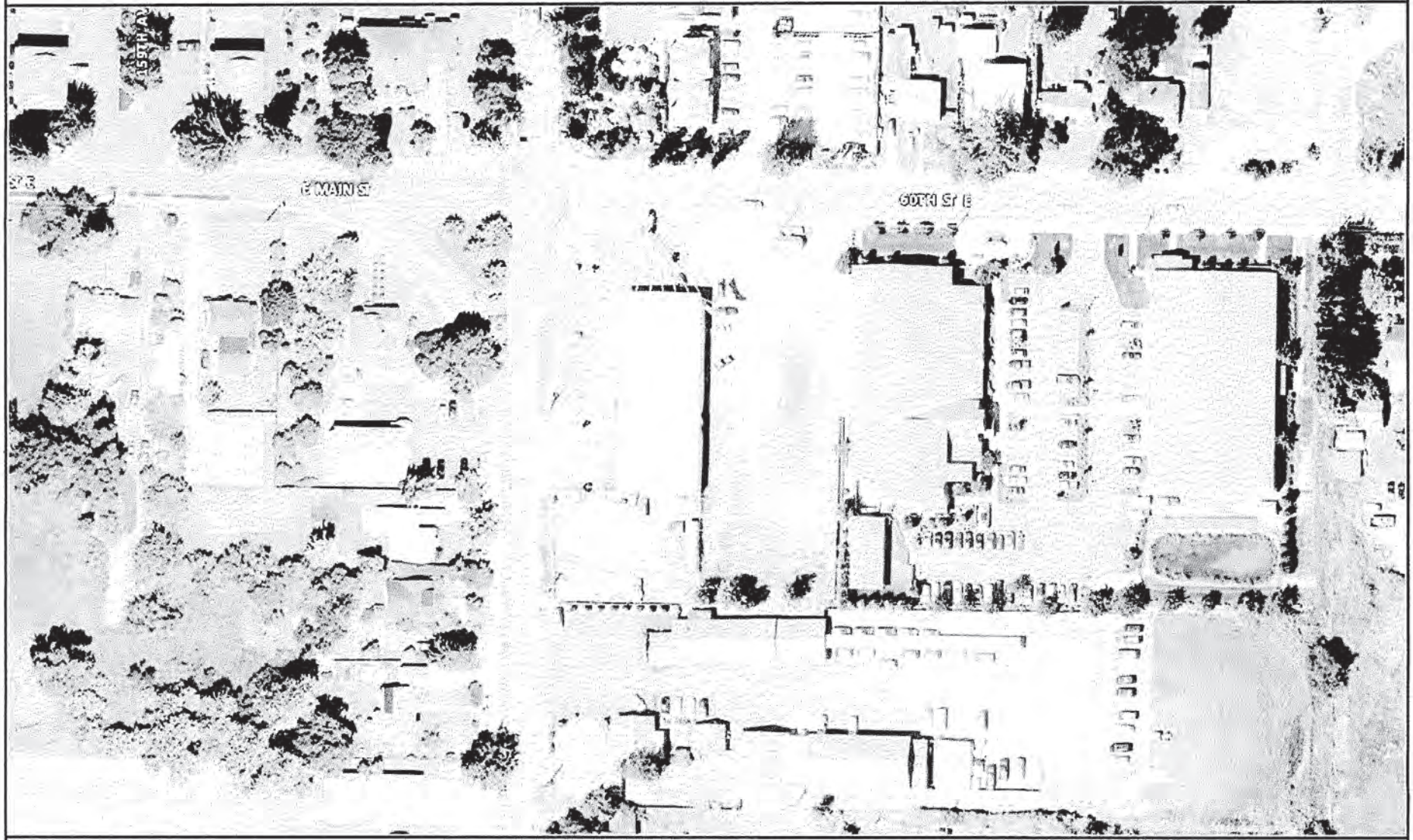
Washington Department of Ecology, Site Hazard Ranking Letter, Sumner National Auto Parts, Sumner WA, Prepared by Megan White, February 11, 1992.

Washington 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 Department of Ecology, Olympia WA, Dangerous Waste Regulations, Chapter 173-303 WAC, Publication 92-91, Amended January 2005.

0520198006



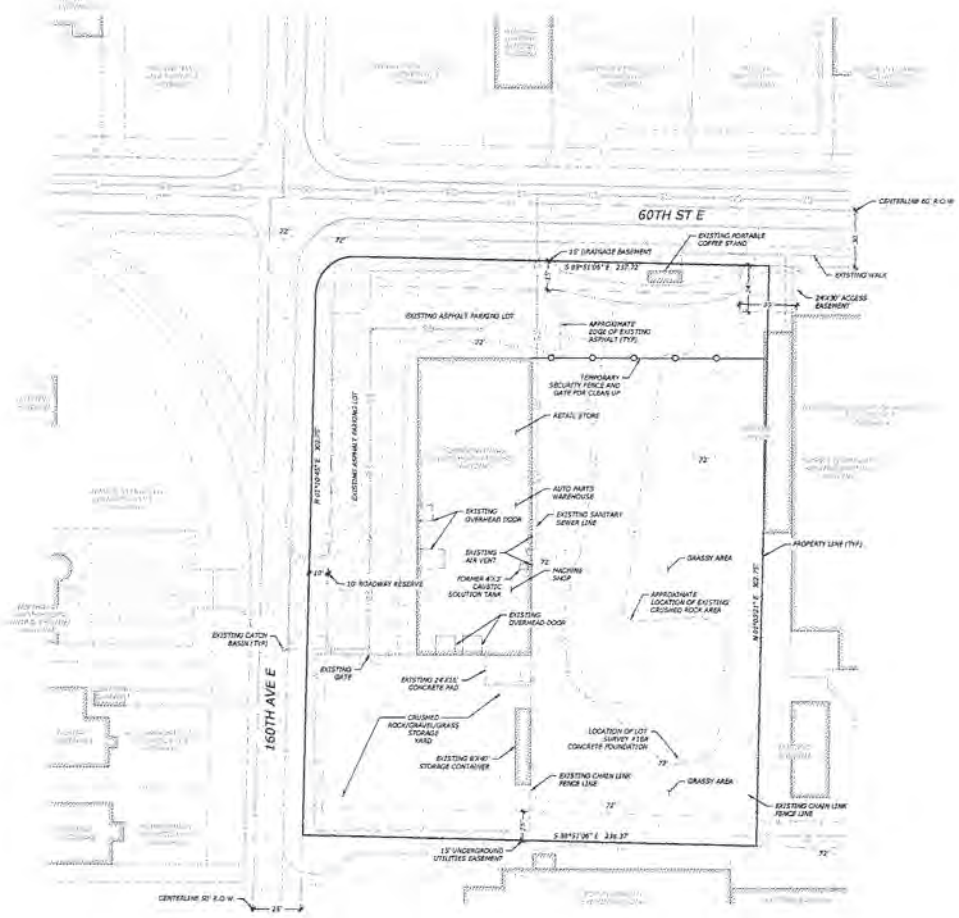
Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. **ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'**. The County makes no warranty of fitness for a particular purpose. 2015/12/16

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

TOPOGRAPHIC NOTE

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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, 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 509288 EASE OF RECORD PER ETN 701497 OUT OF 4-026 SEG M-0139 SP EMS (DCWJES11-5-82) (DC0775U8-26-88)

PROJECT INFO

OWNER/CLIENT:	ENGINEER:
JONATHAN KEMP	BEYLER CONSULTING
P.O. BOX 1212	7602 BRIDGEPORT WAY W, STE 20
PUYALLUP, WA 98371	LAKEWOOD, WA 98499
TEL: 253-841-9710	TEL: 253-301-4157

NO.	DESCRIPTION	INIT	DATE

BEYLER
Plan. Manage

7602 Bridgeport Way W #20
Lakewood, WA 98499
Phone: 253-301-4157
Fax: 253-341-0062

450 Rainier Blvd N
Issaquah, WA 98027
Phone: 425-392-0250
Fax: 425-392-0108

SITE PLAN - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 3

ESSAQUAH, WASHINGTON

DRAWN BY: XAL | CHECKED BY: EML | SCALE: HORZ: 1"=30' VERT: N/A | DATE: 07/13/2016

JOB NUMBER
16-243

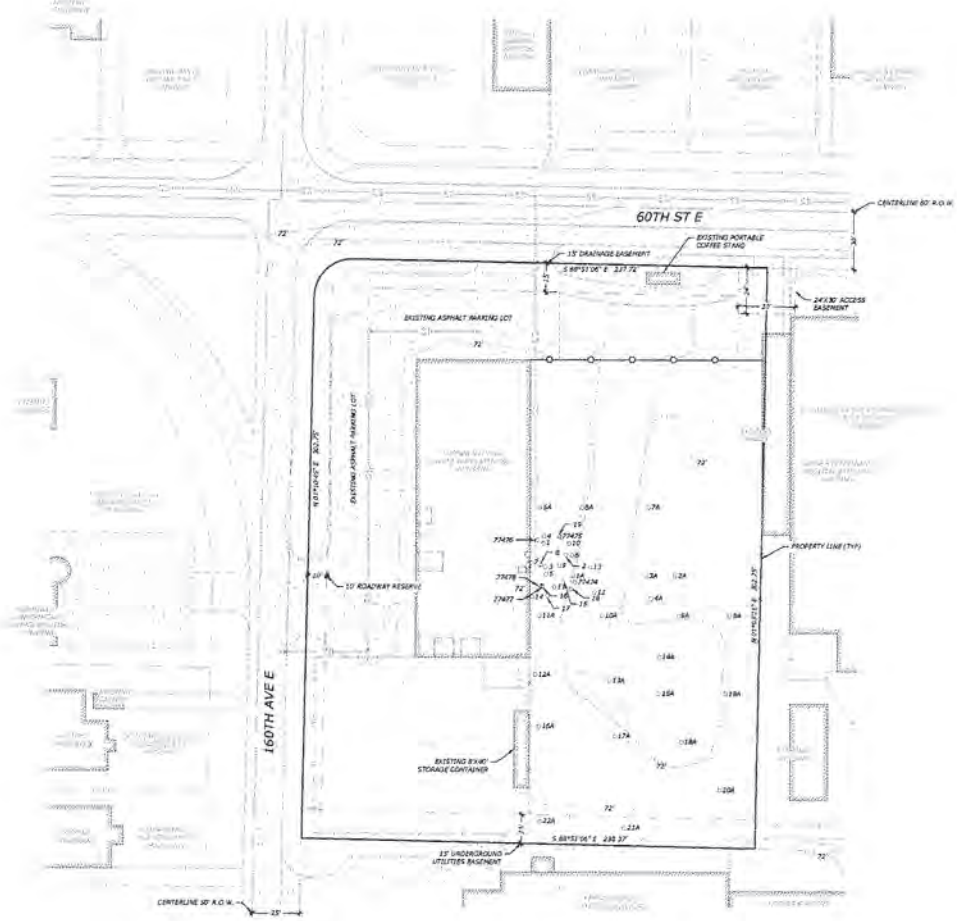
FIG.3

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

SAMPLE LOCATIONS



VICINITY MAP

N.T.S

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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

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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) (DC0775RJB-26-88)

PROJECT INFO

OWNER/CLIENT:
JONATHAN KEMP
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-541-9710

ENGINEER:
BEYLER CONSULTING
7602 BRIDGEPORT WAY W, STE 30
LAKEWOOD, WA 98499
TEL: 253-301-4157

SCALE: 1" = 30'

NO.	DESCRIPTION	INIT	DATE

7602 Bridgeport Way W #30
Lakewood, WA 98499
phone: 253-301-4157
fax: 253-238-3950

455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8035
fax: 425-392-0108

BEYLER
Plan. Manage

SAMPLE LOCATIONS

16008 60TH ST E

FIGURE 4

ISSAQUAH, WASHINGTON

DRAWN BY: KN | CHECKED BY: BML | SCALE: HORZ: 1"=30' VERT: N/A | DATE: 07/13/2016

JOB NUMBER

16-243

FIG.4

EnCo
Environmental Corporation

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 6 SOIL TEST RESULTS													
Sumner Auto ID =													
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'	1' - 2'	4' - 5'	9' - 10'	0.5' - 0.75'	0.5' - 0.75'	0.5' - 0.75'	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					
Chemicals of Concern (Industrial Property)	MTCA A CUL												
Petrloeum Hydrocarbons	mg/kg												
Gas Range Organics wo B	100	<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	[illegible]	113	33.6	27.4	6.65	[illegible]
Arsenic (As)	20	2.27	<1	<1	<1	1.21	2.38	4.33					
Cadmium (Cd)	2	<1	<1	<1	<1	<1	<1	[illegible]	<1	<1	<1	<1	[illegible]
Chromium III (Cr)	2,000	9.01	8.93	5.59	6.14	11.9	13	27.5					
Mercury (Hg)	2	<1											
Other Metals - Total	DWP												
	mg/kg												
Selenium (Se)	20	<1											
Silver (Ag)	[illegible]	<1											
Barium (Ba)	2,000	31											
Zinc (Zn)		21.9											
Nickel (Ni)		5.59											
Copper (Cu)		15.4											
TCLP	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 =		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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)													
Chemicals of Concern (Industrial Property)	[illegible]												
Petroleum Hydrocarbons	mg/kg												
Gas Range Organics wo B	100												
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	[illegible]	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 III (Cr)	2,000												
Mercury (Hg)	2												
Other Metals - Total	mg/kg												
	mg/kg												
Selenium (Se)	20												
Silver (Ag)	100												
Barium (Ba)	2,000												
Zinc (Zn)													
Nickel (Ni)													
Copper (Cu)													
TCLP	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	2												
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 =			
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)			
Chemicals of Concern (Industrial Property)	MTCA B CUL		
Petrloeum Hydrocarbons	mg/kg		
Gas Range Organics wo B	100		
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 III (Cr)	2,000		
Mercury (Hg)	2		
Other Metals - Total	mg/kg		
	mg/kg		
Selenium (Se)	20		
Silver (Ag)	100		
Barium (Ba)	2,000		
Zinc (Zn)			
Nickel (Ni)			
Copper (Cu)			
TCLP	mg/L		
TCLP - Cd	0.2		<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 6B - GROUNDWATER RESULTS							
Sumner Auto Sample ID =	SWA-WA	MW-					
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 wo Benzene	1,000	<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							
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					

EnCo
Environmental Corporation

APPENDIX C

SUPPORT DOCUMENTS

DRAFT ONLY

Waste Disposal Authorization Application

Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

We require the information below to determine if this waste is acceptable for disposal at the City of Tacoma Landfill, the LRI Landfill, the Wm Dickson Waller Road Landfill, or other permitted solid waste facilities. It is unlikely that you will be able to respond in the space provided. Feel free to modify the format or address the information on additional pages. Include all the information requested below and email, fax or mail to:

Date 12.23.15	Email ehsolidwaste@tpchd.org Fax (253) 798-6498 Tacoma-Pierce County Health Department 3629 South D Street MS 1045 Waste Management Tacoma, WA 98418-6813
Site/Generator Name Sumner National Auto Parts	
Site Owner Name Mr. Robert A. Suss	

Describe Where Waste Originated (site address, physical location, company name, project name, etc.) 16008 60th Street East, Sumner WA 98390
Transporter Name Terra Matrix, Brian Garner
Technical Contact/Consultant Name Jonathan M. Kemp, EnCo Environmental Corporation, Puyallup WA, 253.841.9710 / jkemp@encoec.com
Proposed Solid Waste Disposal/Treatment Facility LRI Landfill in Graham
Describe the Site History (if applicable) Retail auto parts store with former engine rebuild and metal parts machine shop (See Attachment)
Describe How Waste is Generated/Source of Waste Spills to the ground surface from spray cleaning engines and parts prior to assembly (See Attacment)
Projected Quantity or Volume of Waste (tons or cubic yards generated per month, quarter, year, once, etc.) 117 ~~600~~ cubic yards, one time load and transport from temporary stockpiles after the cleanup
Describe the Sampling Method(s) and/or Submit Sampling Plan See Attachment: Sampling Procedures used during the 2002 Limited Phase II Site Assessment + Work Plan
Describe and Justify the Number of Samples per Volume of Waste See Attachment: Number of Soil Samples per Volume of Soil
Describe and Justify the Parameters Selected for Analysis Soil samples were collected and tested for the reported Chemicals of Concern identifedy by ECOLOGY during their inspection conducted on February 2, 1991 (See Attachment) TCLP lead and cadmium were analyzed on a composite sample (from 5 grabs) made from all soil samples that exceeded 200 mg/kg Pb from all 25 samples collected in 2015.

Please attach or enclose:

- analytical results
- chain of custody forms
- a sampling plan
- any other documents relevant to the review of the site, facility and/or waste being characterized

By my signature below, I certify that the information presented in this application is true and complete to the best of my knowledge.

Waste Disposal Authorization Application

Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

Applicant Name Robert A. Suss, Jr.	Applicant Title President
Applicant Signature Draft only	Date December 23, 2015
Company Name Sumner National Auto Parts	Company Address 16008 60th Street East, Sumner WA 98390
Phone Number 253.863.5178	Fax Number N/A
Email Address BobSuss@msn.com & jr_suss@sumnernational.com & jkemp@encoec.com	

DRAFT - ONLY

CITY OF SUMNER WASHINGTON

City of Sumner Commercial & Industrial Application

(Please fill out ALL fields unless otherwise noted)

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

File Number: _____

Site/Project Address (if available):		Parcel #: 0520148006		
Owner:	Phone:	Email:		
Owner Address:		City:	State:	Zip:
Surveyor/Engineer/Contractor:		Phone:	Contractor License Number:	
Address:	Email:	City:	State:	Zip:
Contact Person:	Phone:	Fax:		
Contact Address:	Email:	City:	State:	Zip:

Description of Project:

Supporting Materials Required:

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

No ☐ This Application Form and Checklist

No ☐ **Site Plan (1:40 scale - No site plan required for interior tenant improvements)** — **4 - Size 24" x 36"**
Building envelope with building setbacks
Environmental constraints delineated
Streets in relationship to the proposed building including sidewalks, curb, alley, driveway
Location of easements (if any)
Stormwater/open space locations
Parking configuration / Accessible spaces
Utility connections from source to the building (water, sewer, storm)
Location of fire hydrants
Fire access lanes

No ☐ **Building Plans & Elevations (To minimum scale 1/16" = 1 foot & Dimensioned Min.)** — **4 - Size 24" x 36"**
Plans need to be appropriately scaled to paper size.

Proposed use of the spaces and storage arrangements (i.e. bedroom, kitchen, etc)
Design Review Conditions added to plans
Structural design
Elevations

No ☐ **Elevations (Design Review Required– please consult Planning staff)** — **4 - 24" x 36"**

No ☐ **Geotechnical Report (Consult Building Official)** — **2 - Copies**

No ☐ **Structural Design and Calculations** — **2 - Copies**

No ☐ **Total valuation of the project - REQUIRED** — **$**_____

APPLICATION CONTINUED ON PAGE 2

DRAFT - ONLY

CITY OF SUMNER WASHINGTON

City of Sumner Commercial & Industrial Application

(please fill out ALL fields unless otherwise noted)

PAGE 2

Supporting Materials Required:

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

NO ☐ Sprinkler and Alarm Plans (Please consult the fire official for submittal requirements)

Yes ☐ Civil Plans — 4 - Size 24" x 36"

- Yes Erosion Control
- Yes Engineered and stamped by a Washington State licensed engineer.
- Yes Road and storm detail
- Yes Water and Sanitary Sewer (separate sheet from road and storm)

☐ Yes Storm Report — 2 – Copies

☐ Yes PDF Copy of all submitted documents

NOTES:

I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT.

**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)

SIGNATURE OF OWNER / AUTHORIZED AGENT _____ PRINTED NAME _____ DATE: ___/___/___

HOLOCENE DRILLING

1141 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:		Overtime/Hour:		Overtime/Hour:	
Rig:		Other:		Other:	
Level:		Other:		Other:	
Date:		Other:		Other:	

MILEAGE:

Job Start Mileage:		Job End Mileage:		Total Mileage:	

TIME RECORD – FIELD ACTIVITY:

FROM:	TO:	DESCRIPTION:	FROM:	TO:	DESCRIPTION

WELL INFORMATION:

TB#:	FROM:	TO:	WELL DEPTH:	TAG#	DESCRIPTION:

MATERIALS:

DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	NOTES:
Hole Plug/Bag:		1" x 5' PVC Riser:		1" Threaded End Cap:		Dec. Start Card:		
Cemetery Bag:		1.5" x 5' PVC Riser:		1.5" Threaded End Cap:		Res. Prot. Start Card:		
Sand Bag:		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" SP Liners:		1" Slip Cap:		1" x 5' Pre-Pack Screen:		8" x 12" Flush Monument:		
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:		
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/Drain:		
1.5" x 5' PVC Screen:		1.5" J Plug:		3.5" Expend. Drive Point:		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:	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

REMIT TO:
PCRCD,LLC dba LRI-304th St
A WASTE CONNECTIONS COMPANY
17925 MERIDIAN ST E
PUYALLUP, WA 98375
253-847-7555

Date	Account Number
04/30/2021	2190-743
Invoice Number	
9471	
AMOUNT DUE	
$7,765.64	
PAYMENT DUE UPON RECEIPT	

BILL TO:
GALLOWAY ENVIRONMENTAL INC.

15600 NE 8th ST Suite B1 617
BELLEVUE, WA 98008

LATE PAYMENT MAY RESULT IN AN INTERUPTION OF SERVICE. PAST DUE INVOICES MAY BE SUBJECT TO A LATE CHARGE FOR EACH MONTH OR PART THEREOF THAT THE INVOICE IS PAST DUE.

DATE	TICKET	TRUCK ID	REFERENCE	TON/YARD	DESCRIPTION	DOLLARS
					Balance Forward:	**$00.00**
04/08/2021	674570			26.76	SPECIAL WASTE-IN CO	831.70
04/09/2021	674670		123	25.07	SPECIAL WASTE-IN CO	779.18
04/09/2021	674671			11.47	SPECIAL WASTE-IN CO	356.49
04/09/2021	674733		1125	14.43	SPECIAL WASTE-IN CO	448.48
04/09/2021	674735		123	33.42	SPECIAL WASTE-IN CO	1038.69
04/12/2021	674878		1125	13.27	SPECIAL WASTE-IN CO	412.43
04/12/2021	674925		1125	17.05	SPECIAL WASTE-IN CO	529.91
04/12/2021	674986			17.98	SPECIAL WASTE-IN CO	558.82
04/13/2021	675217		123	33.34	SPECIAL WASTE-IN CO	1036.21
04/15/2021	675665		1124	24.68	SPECIAL WASTE-IN CO	767.05
04/16/2021	675767		1124	32.39	SPECIAL WASTE-IN CO	1006.68

Total Tons: 249.86

Invoice Total: $7,765.64

Total Balance Due: $7,765.64

INVOICE AGING

0 - 30 Days	31 - 60 Days	61 - 90 Days	Over 90 Days	Total
$7,765.64	$00.00	$00.00	$00.00	$7,765.64

APPENDIX D

FIELD SAMPLING

&

SCREENING PROCEDURES

SAMPLING AND FIELD SCREENING OF SAMPLES

The sampling protocols and procedures followed appropriate State and federal guidance documents, primarily EPA SW-846 and Washington State guidance documents.

Sample Identification and Shipment

Samples were individually labeled and noted in the field logbook and/or daily field reports. The sample numbers were also used to complete the Chain-of-Custody forms.

Samples were collected in laboratory-supplied "certified clean" glass containers or plastic bottles. These bottles were capped and properly labeled. Information on the labels was filled out completely.

The laboratory was notified approximately when and how many samples will arrive prior to their delivery or field pickup and the samples were hand-delivered within 24 hours of their collection. The samples were kept under refrigeration (or packed with ice or Blue Ice) between the time of sampling and the time of analysis processing. The sample containers were checked on arrival at the laboratory for breakage.

Ecology Environmental Information Management (EIM) System

All sampling and laboratory analytical data obtained by GEI have been provided to save in an electronic format consistent with, and for submittal into, the Ecology's EIM System. This data includes, sample numbers, analytical methods, and GPS and elevation data associated with each sample location.

Data Quality Objectives

Sample acquisition, chemical analysis, and chemical parameter measurements have been performed so that the resulting data meet and support data use requirements. The chemical data have been acquired, documented, verified, and reported to ensure that the specific precision, accuracy, representativeness, comparability, completeness, and sensitivity requirements are achieved.

Data Delivery

The data have been reported electronically in a Microsoft Excel spreadsheet or compatible format - data is provided in a format consistent with, and for submitting into, Ecology's EIM. GEI notifies Client of any deviations or noncompliance events related to chemical data quality management requirements that affect data use and will immediately take corrective actions.

Soil Sampling

Soil sampling was the primary method of site contaminant characterization. To investigate for the presence of soil contamination, the soil samples were recovered at each sample location using procedures designed to minimize the risk of cross contamination of the samples. Laboratory-supplied glass jars, VOA vials, and Teflon tubes have been provided by the laboratory to be used at each sample location. Sampling equipment was thoroughly decontaminated prior to its use and between sampling locations using a Aquinox® wash (or equivalent) solution followed by a distilled water rinse, as necessary.

The following summary describes the sampling and field-testing of the soil samples.

Sampling Protocols and Procedures

GEI selected the "Laboratory Preservation" option for soil sampling for volatiles under EPA Method 5035A. At each sample location, GEI collected approximately 5 grams of soil in two pre-weighed 40-mil VOA vials and one 4-ounce glass jar. Soil samples were collected and preserved in the 40-mil VOA vials using the laboratory-supplied Teflon coring device per EPA Method 5035A. Soil samples in the 4-ounce glass jar were collected with a decontaminated, stainless steel spoon or were placed (scooped) directly into the glass container without the use of the spoon.

Handling, storage, and shipment

All the samples were properly labeled, stored in a chilled container (preserved with ice or Blue Ice) to approximately 4 degrees Celsius, and hand-delivered (or picked up by the laboratory) to the laboratory within 24 hours of their collection, under proper chain-of-custody protocols. A field logbook and/or daily field report(s) was/were used to document field activities and other relevant information regarding the sampling.

APPENDIX E

LABORATORY ANALYTICAL REPORTS

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 30, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1710-134

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on October 11, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

Case Narrative

Samples were collected on October 10, 2017 and received by the laboratory on October 11, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	56	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	58	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	63	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	53	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	62	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	53	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	55	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**Detected**	51	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	74	NWTPH-HCID	10-12-17	10-12-17	U1
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	62	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*113*	*50-150*				
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*132*	*50-150*				
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	52	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil	**Detected**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*113*	*50-150*				
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
Gasoline Range Organics	**ND**	21	NWTPH-HCID	10-12-17	10-13-17	
Diesel Range Organics	**ND**	54	NWTPH-HCID	10-12-17	10-13-17	
Lube Oil	**Detected**	110	NWTPH-HCID	10-12-17	10-13-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-12-17	10-12-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-12-17	10-12-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-12-17	10-12-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-Dx

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-Dx

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-Dx
QUALITY CONTROL

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0074	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*75-131*				
Toluene-d8	*106*	*83-126*				
4-Bromofluorobenzene	*101*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0089	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Acetone	0.0085	0.0067	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
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Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0027	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0067	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*131*	*75-131*				
Toluene-d8	*120*	*83-126*				
4-Bromofluorobenzene	*109*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0071	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-5@0.5'**					
Laboratory ID:	10-134-05					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*75-131*				
Toluene-d8	*106*	*83-126*				
4-Bromofluorobenzene	*103*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0068	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-7@0.5'**					
Laboratory ID:	10-134-07					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*75-131*				
Toluene-d8	*110*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0074	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-10@0.5'**					
Laboratory ID:	10-134-10					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*75-131*				
Toluene-d8	*110*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0070	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-11@2'**					
Laboratory ID:	10-134-11					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0021	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*75-131*				
Toluene-d8	*115*	*83-126*				
4-Bromofluorobenzene	*100*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0078	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	0.033	0.0059	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-13@2'**					
Laboratory ID:	10-134-13					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0024	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-131*				
Toluene-d8	*98*	*83-126*				
4-Bromofluorobenzene	*96*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0076	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0023	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*75-131*				
Toluene-d8	*109*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

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Samples Submitted: October 11, 2017
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Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0077	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	0.18	0.0058	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	0.027	0.0058	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-16@2'**					
Laboratory ID:	10-134-16					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0023	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*75-131*				
Toluene-d8	*97*	*83-126*				
4-Bromofluorobenzene	*93*	*78-125*				

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Project: 37018

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0081	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0025	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*75-131*				
Toluene-d8	*105*	*83-126*				
4-Bromofluorobenzene	*99*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.011	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0033	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0082	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*99*	*83-126*				
4-Bromofluorobenzene	*96*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1016S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloromethane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroethane	ND	0.0066	EPA 8260C	10-16-17	10-16-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Acetone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Iodomethane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Butanone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chloroform	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Benzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Toluene	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1016S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-16-17	10-16-17	
o-Xylene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Styrene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromoform	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-16-17	10-16-17	
Naphthalene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-16-17	10-16-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*115*	*75-131*				
Toluene-d8	*108*	*83-126*				
4-Bromofluorobenzene	*110*	*78-125*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1016S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0420**	**0.0412**	0.0500	0.0500	84	82	58-126	2	20	
Benzene	**0.0462**	**0.0462**	0.0500	0.0500	92	92	72-122	0	19	
Trichloroethene	**0.0428**	**0.0418**	0.0500	0.0500	86	84	75-120	2	20	
Toluene	**0.0449**	**0.0440**	0.0500	0.0500	90	88	78-123	2	19	
Chlorobenzene	**0.0449**	**0.0443**	0.0500	0.0500	90	89	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*111*	*115*	*75-131*			
Toluene-d8					*102*	*109*	*83-126*			
4-Bromofluorobenzene					*102*	*105*	*78-125*			

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
n-Nitrosodimethylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.34	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-1@0.5'**					
Laboratory ID:	10-134-01					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.034	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.34	EPA 8270D	10-13-17	10-17-17	
Pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**ND**	0.0069	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*52*	*18 - 113*				
Phenol-d6	*58*	*19 - 119*				
Nitrobenzene-d5	*58*	*19 - 119*				
2-Fluorobiphenyl	*61*	*33 - 109*				
2,4,6-Tribromophenol	*64*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.37	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.0077**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**0.020**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-3@2'**					
Laboratory ID:	10-134-03					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.057**	0.037	EPA 8270D	10-13-17	10-17-17	
Anthracene	**0.0086**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.037	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.091**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzidine	**ND**	0.37	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.099**	0.037	EPA 8270D	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.037**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.057**	0.037	EPA 8270D	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.054**	0.037	EPA 8270D	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**0.021**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**0.044**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.038**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**0.0083**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**0.039**	0.0074	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*57*	*18 - 113*				
Phenol-d6	*60*	*19 - 119*				
Nitrobenzene-d5	*63*	*19 - 119*				
2-Fluorobiphenyl	*67*	*33 - 109*				
2,4,6-Tribromophenol	*72*	*19 - 121*				
Terphenyl-d14	*68*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.36	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.0088**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.012**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**0.0094**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.016**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.036	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.016**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.36	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.015**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.0082**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.015**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.018**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**0.0090**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.011**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**0.013**	0.0072	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 113*				
Phenol-d6	*35*	*19 - 119*				
Nitrobenzene-d5	*41*	*19 - 119*				
2-Fluorobiphenyl	*45*	*33 - 109*				
2,4,6-Tribromophenol	*42*	*19 - 121*				
Terphenyl-d14	*44*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
n-Nitrosodimethylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.39	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
1-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Hexachlorocyclopentadiene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
3-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-8@2'**					
Laboratory ID:	10-134-08					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4-Nitrophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.013**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Carbazole	**ND**	0.039	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.011**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzidine	**ND**	0.39	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.010**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Chrysene	**0.0089**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.011**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[a]pyrene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Benzo[g,h,i]perylene	**ND**	0.0078	EPA 8270D/SIM	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*18 - 113*				
Phenol-d6	*48*	*19 - 119*				
Nitrobenzene-d5	*50*	*19 - 119*				
2-Fluorobiphenyl	*57*	*33 - 109*				
2,4,6-Tribromophenol	*57*	*19 - 121*				
Terphenyl-d14	*60*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
n-Nitrosodimethylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.42	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.046**	0.042	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**0.067**	0.042	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.013**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.010**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-9@2'**					
Laboratory ID:	10-134-09					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.021**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.042	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.010**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.42	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.0095**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.015**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.21	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.013**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**ND**	0.0084	EPA 8270D/SIM	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*45*	*18 - 113*				
Phenol-d6	*46*	*19 - 119*				
Nitrobenzene-d5	*60*	*19 - 119*				
2-Fluorobiphenyl	*62*	*33 - 109*				
2,4,6-Tribromophenol	*64*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-17-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Methylphenol (o-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dimethylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Naphthalene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Methylnaphthalene	**0.020**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.012**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Acenaphthylene	**0.014**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Phenanthrene	**0.083**	0.035	EPA 8270D	10-13-17	10-17-17	
Anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-17-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Fluoranthene	**0.10**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-17-17	
Pyrene	**0.087**	0.035	EPA 8270D	10-13-17	10-17-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[a]anthracene	**0.041**	0.035	EPA 8270D	10-13-17	10-17-17	
Chrysene	**0.058**	0.035	EPA 8270D	10-13-17	10-17-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-17-17	
Benzo[b]fluoranthene	**0.085**	0.035	EPA 8270D	10-13-17	10-17-17	
Benzo(j,k)fluoranthene	**0.024**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.054**	0.035	EPA 8270D	10-13-17	10-17-17	
Indeno[1,2,3-cd]pyrene	**0.055**	0.035	EPA 8270D	10-13-17	10-17-17	
Dibenz[a,h]anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.094**	0.035	EPA 8270D	10-13-17	10-17-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 113*				
Phenol-d6	*40*	*19 - 119*				
Nitrobenzene-d5	*32*	*19 - 119*				
2-Fluorobiphenyl	*49*	*33 - 109*				
2,4,6-Tribromophenol	*59*	*19 - 121*				
Terphenyl-d14	*61*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.16**	0.035	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.037**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.056**	0.035	EPA 8270D	10-13-17	10-18-17	
1-Methylnaphthalene	**0.027**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
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Laboratory Reference: 1710-134
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.036**	0.035	EPA 8270D	10-13-17	10-18-17	
Anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.031**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.036**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.058**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**0.018**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.035**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.052**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**0.013**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.18**	0.035	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*47*	*18 - 113*				
Phenol-d6	*57*	*19 - 119*				
Nitrobenzene-d5	*56*	*19 - 119*				
2-Fluorobiphenyl	*67*	*33 - 109*				
2,4,6-Tribromophenol	*62*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

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Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
n-Nitrosodimethylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**0.044**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**0.13**	0.035	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**0.036**	0.035	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.023**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.015**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.033**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.035	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.023**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzidine	**ND**	0.35	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.021**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.011**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.017**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.021**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.012**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.017**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0070	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.037**	0.035	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*46*	*18 - 113*				
Phenol-d6	*54*	*19 - 119*				
Nitrobenzene-d5	*57*	*19 - 119*				
2-Fluorobiphenyl	*60*	*33 - 109*				
2,4,6-Tribromophenol	*59*	*19 - 121*				
Terphenyl-d14	*60*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Pyridine	**ND**	0.36	EPA 8270D	10-13-17	10-18-17	
Phenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Aniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Chlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Hexachloroethane	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Nitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Isophorone	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Naphthalene	**0.011**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Methylnaphthalene	**0.013**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
1-Methylnaphthalene	**0.0073**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Dimethylphthalate	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Acenaphthylene	**0.0073**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
3-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Acenaphthene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4-Nitrophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Dibenzofuran	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Nitroaniline	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Fluorene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Phenanthrene	**0.034**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Anthracene	**0.0076**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Carbazole	**ND**	0.036	EPA 8270D	10-13-17	10-18-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Fluoranthene	**0.040**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzidine	**ND**	0.36	EPA 8270D	10-13-17	10-18-17	
Pyrene	**0.037**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[a]anthracene	**0.020**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Chrysene	**0.031**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	10-13-17	10-18-17	
Benzo[b]fluoranthene	**0.038**	0.036	EPA 8270D	10-13-17	10-18-17	
Benzo(j,k)fluoranthene	**0.013**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[a]pyrene	**0.023**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Indeno[1,2,3-cd]pyrene	**0.029**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Dibenz[a,h]anthracene	**ND**	0.0071	EPA 8270D/SIM	10-13-17	10-18-17	
Benzo[g,h,i]perylene	**0.040**	0.036	EPA 8270D	10-13-17	10-18-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*18 - 113*				
Phenol-d6	*51*	*19 - 119*				
Nitrobenzene-d5	*53*	*19 - 119*				
2-Fluorobiphenyl	*63*	*33 - 109*				
2,4,6-Tribromophenol	*57*	*19 - 121*				
Terphenyl-d14	*63*	*30 - 116*				

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Project: 37018

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Pyridine	**ND**	0.33	EPA 8270D	10-13-17	10-16-17	
Phenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Aniline	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Isophorone	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	

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Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Carbazole	**ND**	0.033	EPA 8270D	10-13-17	10-16-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzidine	**ND**	0.33	EPA 8270D	10-13-17	10-16-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-13-17	10-16-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-13-17	10-13-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*65*	*19 - 119*				
Nitrobenzene-d5	*66*	*19 - 119*				
2-Fluorobiphenyl	*72*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.956**	**1.07**	1.33	1.33	72	80	39 - 109	11	36	
2-Chlorophenol	**0.979**	**1.11**	1.33	1.33	74	83	42 - 105	13	35	
1,4-Dichlorobenzene	**0.462**	**0.547**	0.667	0.667	69	82	31 - 103	17	37	
n-Nitroso-di-n-propylamine	**0.476**	**0.533**	0.667	0.667	71	80	36 - 104	11	34	
1,2,4-Trichlorobenzene	**0.479**	**0.540**	0.667	0.667	72	81	32 - 104	12	38	
4-Chloro-3-methylphenol	**1.10**	**1.16**	1.33	1.33	83	87	48 - 107	5	31	
Acenaphthene	**0.545**	**0.561**	0.667	0.667	82	84	38 - 102	3	33	
4-Nitrophenol	**1.11**	**1.10**	1.33	1.33	83	83	27 - 121	1	35	
2,4-Dinitrotoluene	**0.527**	**0.538**	0.667	0.667	79	81	36 - 103	2	34	
Pentachlorophenol	**1.36**	**1.29**	1.33	1.33	102	97	21 - 114	5	37	
Pyrene	**0.519**	**0.545**	0.667	0.667	78	82	46 - 108	5	31	
Surrogate:										
2-Fluorophenol					*69*	*80*	*18 - 113*			
Phenol-d6					*73*	*82*	*19 - 119*			
Nitrobenzene-d5					*74*	*83*	*19 - 119*			
2-Fluorobiphenyl					*76*	*78*	*33 - 109*			
2,4,6-Tribromophenol					*83*	*77*	*19 - 121*			
Terphenyl-d14					*77*	*79*	*30 - 116*			

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-01					
Client ID:	**NAP-1@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**18**	0.52	6010C	10-18-17	10-18-17	
Lead	**11**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-02					
Client ID:	**NAP-2@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**31**	0.52	6010C	10-18-17	10-18-17	
Lead	**120**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-03					
Client ID:	**NAP-3@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.56	6010C	10-18-17	10-18-17	
Chromium	**25**	0.56	6010C	10-18-17	10-18-17	
Lead	**46**	5.6	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.28	7471B	10-18-17	10-18-17	

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Project: 37018

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-04					
Client ID:	**NAP-4@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**6.5**	0.61	6010C	10-18-17	10-18-17	
Chromium	**54**	0.61	6010C	10-18-17	10-18-17	
Lead	**4400**	61	6010C	10-18-17	10-19-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-05					
Client ID:	**NAP-5@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**27**	0.52	6010C	10-18-17	10-18-17	
Lead	**34**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-06					
Client ID:	**NAP-6@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**1.4**	0.54	6010C	10-18-17	10-18-17	
Chromium	**21**	0.54	6010C	10-18-17	10-18-17	
Lead	**73**	5.4	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-07					
Client ID:	**NAP-7@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**16**	0.52	6010C	10-18-17	10-18-17	
Lead	**46**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-08					
Client ID:	**NAP-8@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.58	6010C	10-18-17	10-18-17	
Chromium	**16**	0.58	6010C	10-18-17	10-18-17	
Lead	**16**	5.8	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.29	7471B	10-18-17	10-18-17	
Lab ID:	10-134-09					
Client ID:	**NAP-9@2'**					
Arsenic	**ND**	13	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.63	6010C	10-18-17	10-18-17	
Chromium	**16**	0.63	6010C	10-18-17	10-18-17	
Lead	**20**	6.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-10					
Client ID:	**NAP-10@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.53	6010C	10-18-17	10-18-17	
Chromium	**27**	0.53	6010C	10-18-17	10-18-17	
Lead	**340**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-11					
Client ID:	**NAP-11@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.62	6010C	10-18-17	10-18-17	
Chromium	**19**	0.62	6010C	10-18-17	10-18-17	
Lead	**82**	6.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-12					
Client ID:	**NAP-12@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.53	6010C	10-18-17	10-18-17	
Chromium	**35**	0.53	6010C	10-18-17	10-18-17	
Lead	**500**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-13					
Client ID:	**NAP-13@2'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.55	6010C	10-18-17	10-18-17	
Chromium	**20**	0.55	6010C	10-18-17	10-18-17	
Lead	**ND**	5.5	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.28	7471B	10-18-17	10-18-17	
Lab ID:	10-134-14					
Client ID:	**NAP-14@0.5'**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**0.76**	0.51	6010C	10-18-17	10-18-17	
Chromium	**33**	0.51	6010C	10-18-17	10-18-17	
Lead	**270**	5.1	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-15					
Client ID:	**NAP-15@0.5'**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**1.4**	0.53	6010C	10-18-17	10-18-17	
Chromium	**76**	0.53	6010C	10-18-17	10-18-17	
Lead	**1100**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-16					
Client ID:	**NAP-16@2'**					
Arsenic	**ND**	12	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.62	6010C	10-18-17	10-18-17	
Chromium	**17**	0.62	6010C	10-18-17	10-18-17	
Lead	**24**	6.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.31	7471B	10-18-17	10-18-17	
Lab ID:	10-134-17					
Client ID:	**NAP-SP-1**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.54	6010C	10-18-17	10-18-17	
Chromium	**21**	0.54	6010C	10-18-17	10-18-17	
Lead	**170**	5.4	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	
Lab ID:	10-134-18					
Client ID:	**NAP-SP-2**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.52	6010C	10-18-17	10-18-17	
Chromium	**24**	0.52	6010C	10-18-17	10-18-17	
Lead	**280**	5.2	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-19					
Client ID:	**NAP-SP-3**					
Arsenic	**ND**	10	6010C	10-18-17	10-18-17	
Cadmium	**ND**	0.51	6010C	10-18-17	10-18-17	
Chromium	**20**	0.51	6010C	10-18-17	10-18-17	
Lead	**90**	5.1	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.26	7471B	10-18-17	10-18-17	
Lab ID:	10-134-20					
Client ID:	**NAP-SP-4**					
Arsenic	**ND**	11	6010C	10-18-17	10-18-17	
Cadmium	**0.94**	0.53	6010C	10-18-17	10-18-17	
Chromium	**28**	0.53	6010C	10-18-17	10-18-17	
Lead	**210**	5.3	6010C	10-18-17	10-18-17	
Mercury	**ND**	0.27	7471B	10-18-17	10-18-17	

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TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-18-17
Date Analyzed:	10-18-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1018SM1&MB1018S2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25

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TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-18-17
Date Analyzed: 10-18-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-134-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Cadmium	**1.27**	**1.29**	2	0.50	
Chromium	**19.5**	**17.6**	10	0.50	
Lead	**67.9**	**75.8**	11	5.0	
Mercury	**ND**	**ND**	NA	0.25	

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TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-18-17
Date Analyzed: 10-18-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-134-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**90.4**	90	**89.8**	90	1	
Cadmium	50.0	**45.7**	89	**45.8**	89	0	
Chromium	100	**108**	88	**107**	87	1	
Lead	250	**283**	86	**285**	87	0	
Mercury	0.500	**0.543**	109	**0.524**	105	4	

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NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-2@0.5'**					
Laboratory ID:	10-134-02					
Diesel Range Organics	**ND**	26	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil	**140**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**NAP-4@2'**					
Laboratory ID:	10-134-04					
Diesel Range Organics	**ND**	150	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**880**	61	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**NAP-6@2'**					
Laboratory ID:	10-134-06					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**220**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**NAP-12@0.5'**					
Laboratory ID:	10-134-12					
Diesel Range Organics	**ND**	80	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**420**	53	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				
Client ID:	**NAP-14@0.5'**					
Laboratory ID:	10-134-14					
Diesel Range Organics	**ND**	44	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**350**	51	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*72*	*50-150*				
Client ID:	**NAP-15@0.5'**					
Laboratory ID:	10-134-15					
Diesel Range Organics	**ND**	66	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**460**	53	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*71*	*50-150*				

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NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**NAP-SP-1**					
Laboratory ID:	10-134-17					
Diesel Range Organics	**ND**	27	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil	**130**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				
Client ID:	**NAP-SP-2**					
Laboratory ID:	10-134-18					
Diesel Range Organics	**ND**	45	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**160**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*67*	*50-150*				
Client ID:	**NAP-SP-3**					
Laboratory ID:	10-134-19					
Diesel Range Organics	**ND**	61	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**270**	52	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				
Client ID:	**NAP-SP-4**					
Laboratory ID:	10-134-20					
Diesel Range Organics	**ND**	48	NWTPH-Dx	10-18-17	10-19-17	U1
Lube Oil	**240**	54	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-18-17	10-19-17	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-18-17	10-19-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*71*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-134-02										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil	**133**	**97.7**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*100*	*107*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TCLP LEAD
EPA 1311/6010C

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-134-18					
Client ID:	**NAP-SP-2**					
Lead	**0.36**	0.20	6010C	10-26-17	10-26-17	
Lab ID:	10-134-20					
Client ID:	**NAP-SP-4**					
Lead	**ND**	0.20	6010C	10-26-17	10-26-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TCLP LEAD
EPA 1311/6010C
METHOD BLANK QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	MB1026TM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	0.20

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TCLP LEAD
EPA 1311/6010C
DUPLICATE QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	10-134-18

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**0.362**	**0.376**	4	0.20	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

TCLP LEAD
EPA 1311/6010C
MS/MSD QUALITY CONTROL

Date Prepared:	10-25-17
Date Extracted:	10-26-17
Date Analyzed:	10-26-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	10-134-18

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	10.0	**9.70**	93	**9.78**	94	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 30, 2017
Samples Submitted: October 11, 2017
Laboratory Reference: 1710-134
Project: 37018

% MOISTURE

Date Analyzed: 10-12-17

Client ID	Lab ID	% Moisture
NAP-1@0.5'	10-134-01	3
NAP-2@0.5'	10-134-02	3
NAP-3@2'	10-134-03	10
NAP-4@2'	10-134-04	18
NAP-5@0.5'	10-134-05	4
NAP-6@2'	10-134-06	7
NAP-7@0.5'	10-134-07	3
NAP-8@2'	10-134-08	14
NAP-9@2'	10-134-09	20
NAP-10@0.5'	10-134-10	5
NAP-11@2'	10-134-11	19
NAP-12@0.5'	10-134-12	5
NAP-13@2'	10-134-13	9
NAP-14@0.5'	10-134-14	2
NAP-15@0.5'	10-134-15	5
NAP-16@2'	10-134-16	20
NAP-SP-1	10-134-17	8
NAP-SP-2	10-134-18	4
NAP-SP-3	10-134-19	3
NAP-SP-4	10-134-20	7

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENV. INC.
Project Number: 37018
Project Name: National Auto Parts
Project Manager: GARY GALLOWAY
Sampled by: GARY Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-134

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals NO	Total MTCA Metals yes	TCLP Metals	HEM (oil and grease) 1664A				% Moisture
1	NAP-1 @ 0.5'	10/10/17	0900	S		X							X						X	X						X
2	2 @ 0.5'		0910			X			X	X									X	X						
3	3 @ 2'		0920			X							X						X	X						
4	4 @ 2'		0930			X			X	X									X	X						
5	5 @ 0.5'		0940			X				X									X	X						
6	6 @ 2'		1000			X			X				X						X	X						
7	7 @ 0.5'		1020			X				X									X	X						
8	8 @ 2'		10:30			X							X						X	X						
9	9 @ 2'		10:40			X							X						X	X						
10	10 @ 0.5'		10:50			X				X									X	X						

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	10/11/17	10:45
Received	[signature]	OnSite Env	10/11/17	10:45
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 10/17/17. DB (STA)
○ Added 10/20/17. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENV.
Project Number: 37018
Project Name: National Auto Parts
Project Manager: GARY GALLOWAY
Sampled by: Gary Galloway

Turnaround Request (in working days) (Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-134

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals LEAD	HEM (oil and grease) 1664A				% Moisture
11	NAP 11@ 2'	10/10/17	11:20	S		X			~~X~~ NO	X										X						X
12	12@ 0.5'		11:40			X			X				X							X						
13	13@ 2'		12:00			X				X										X						
14	14@ 0.5'		12:20			X			X	X										X						
15	15@ 0.5'		13:10			X			X				X							X						
16	16@ 2'		13:30			X				X										X						
17	SP-1		14:20			X			X	X										X						
18	SP-2		14:40			X			X				X							X	O					
19	SP-3		14:50			X			X	X										X						
20	SP-4		15:15			X			X				X							X	O					

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	10/11/17	10:45
Received	[signature]	OnSite Env	10/11/17	1045
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 12, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1712-078

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 7, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

Case Narrative

Samples were collected on December 6, 2017 and received by the laboratory on December 7, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-01					
Client ID:	**17@1'**					
Lead	**65**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-02					
Client ID:	**18@1'**					
Lead	**88**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-03					
Client ID:	**19@1'**					
Lead	**180**	5.6	6010C	12-11-17	12-11-17	
Lab ID:	12-078-04					
Client ID:	**20@1'**					
Lead	**310**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-05					
Client ID:	**21@1'**					
Lead	**420**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-06					
Client ID:	**22@1'**					
Lead	**680**	5.9	6010C	12-11-17	12-11-17	

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Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-07					
Client ID:	**23@1'**					
Lead	**1200**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-08					
Client ID:	**24@1'**					
Lead	**240**	5.7	6010C	12-11-17	12-11-17	
Lab ID:	12-078-09					
Client ID:	**25@3.5'**					
Lead	**39**	6.1	6010C	12-11-17	12-11-17	
Lab ID:	12-078-10					
Client ID:	**26@3.5'**					
Lead	**160**	6.3	6010C	12-11-17	12-11-17	
Lab ID:	12-078-11					
Client ID:	**27@3'**					
Lead	**410**	5.9	6010C	12-11-17	12-11-17	
Lab ID:	12-078-12					
Client ID:	**28@3'**					
Lead	**8.6**	6.0	6010C	12-11-17	12-11-17	

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Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-13					
Client ID:	**29@1'**					
Lead	**740**	5.5	6010C	12-11-17	12-11-17	
Lab ID:	12-078-14					
Client ID:	**30@1'**					
Lead	**1600**	5.4	6010C	12-11-17	12-11-17	
Lab ID:	12-078-15					
Client ID:	**SP-5**					
Lead	**240**	6.0	6010C	12-11-17	12-11-17	
Lab ID:	12-078-16					
Client ID:	**SP-6**					
Lead	**220**	5.8	6010C	12-11-17	12-11-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-11-17
Date Analyzed:	12-11-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1211SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

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Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 12-11-17
Date Analyzed: 12-11-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-032-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**7.25**	**6.55**	10	5.0	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 12-11-17
Date Analyzed: 12-11-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-032-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**227**	88	**225**	87	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 12, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078
Project: 37018

% MOISTURE

Date Analyzed: 12-11-17

Client ID	Lab ID	% Moisture
17@1'	12-078-01	10
18@1'	12-078-02	9
19@1'	12-078-03	10
20@1'	12-078-04	9
21@1'	12-078-05	9
22@1'	12-078-06	15
23@1'	12-078-07	9
24@1'	12-078-08	12
25@3.5'	12-078-09	19
26@3.5'	12-078-10	20
27@3'	12-078-11	16
28@3'	12-078-12	17
29@1'	12-078-13	9
30@1'	12-078-14	7
SP-5	12-078-15	17
SP-6	12-078-16	14

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENVIRONMENTAL
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total lead				% Moisture
1	17@ 1'	12/6/17	13:30	S	1																		X				X
2	18@ 1'		13:40																				X				
3	19@ 1'		13:50																				X				
4	20@ 1'		13:55																				X				
5	21@ 1'		14:00																				X				
6	22@ 1'		14:05																				X				
7	23@ 1'		14:10																				X				
8	24@ 1'		14:20																				X				
9	25@ 3.5'		14:30																				X				
10	26@ 3.5'		14:40																				X				

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Lead Total				% Moisture
11	27@3'	12/6/17	15:00	S	1																		X				X
12	28@3'		15:10																				X				X
13	29@1'		15:20																				X				X
14	30@1'		15:30																				X				X
15	SP-5		16:00																				X				X
16	SP-6		16:10																				X				X

	Signature	Company	Date	Time
Relinquished	[signature]	Galloway Env.	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 20, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1712-078B

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 7, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

Case Narrative

Samples were collected on December 6, 2017 and received by the laboratory on December 7, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-078-15					
Client ID:	**SP-5**					
Lead	**0.28**	0.20	6010C	12-18-17	12-18-17	
Lab ID:	12-078-16					
Client ID:	**SP-6**					
Lead	**ND**	0.20	6010C	12-18-17	12-18-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
METHOD BLANK QUALITY CONTROL

Date Prepared:	12-15-17
Date Extracted:	12-18-17
Date Analyzed:	12-18-17
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	MB1218TM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	0.20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
DUPLICATE QUALITY CONTROL

Date Prepared: 12-15-17
Date Extracted: 12-18-17
Date Analyzed: 12-18-17

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 12-078-16

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	0.20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 20, 2017
Samples Submitted: December 7, 2017
Laboratory Reference: 1712-078B
Project: 37018

TCLP LEAD
EPA 1311/6010C
MS/MSD QUALITY CONTROL

Date Prepared: 12-15-17
Date Extracted: 12-18-17
Date Analyzed: 12-18-17

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 12-078-16

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	10.0	**9.53**	95	**9.53**	95	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENVIRONMENTAL
Project Number: 37018
Project Name: National Auto Ports
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total lead				% Moisture
1	17@ 1'	12/6/17	13:30	S	1																		X				X
2	18@ 1'		13:40																				X				
3	19@ 1'		13:50																				X				
4	20@ 1'		13:55																				X				
5	21@ 1'		14:00																				X				
6	22@ 1'		14:05																				X				
7	23@ 1'		14:10																				X				
8	24@ 1'		14:20																				X				
9	25@ 3.5'		14:30																				X				
10	26@ 3.5'		14:40																				X				

	Signature	Company	Date	Time
Relinquished	[signature]	GALLOWAY ENV	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 12/12/17 ~~3~~ STA

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental
Project Number: 37018
Project Name: National Auto Parts
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP ~~Metals~~ Lead	HEM (oil and grease) 1664A	Lead Total				% Moisture
11	27@3'	12/6/17	15:00	S	1																		X				X
12	28@3'		15:10																				X				X
13	29@1'		15:20																				X				X
14	30@1'		15:30																				X				X
15	SP-5		16:00																		X		X				X
16	SP-6		16:10																		X		X				X

	Signature	Company	Date	Time
Relinquished	[signature]	Galloway Env.	12/7/17	13:45
Received	[signature]	OSE	12/7/17	1345
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 21, 2017

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1712-198

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 19, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

Case Narrative

Samples were collected on December 18, 2017 and received by the laboratory on December 19, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-198-01					
Client ID:	**31@2'**					
Lead	**12**	5.5	6010C	12-19-17	12-19-17	
Lab ID:	12-198-02					
Client ID:	**32@2'**					
Lead	**50**	5.3	6010C	12-19-17	12-19-17	
Lab ID:	12-198-03					
Client ID:	**33@2'**					
Lead	**530**	5.6	6010C	12-19-17	12-19-17	
Lab ID:	12-198-04					
Client ID:	**34@2'**					
Lead	**540**	6.0	6010C	12-19-17	12-19-17	
Lab ID:	12-198-05					
Client ID:	**35@2'**					
Lead	**22**	5.4	6010C	12-19-17	12-19-17	
Lab ID:	12-198-06					
Client ID:	**36@2'**					
Lead	**410**	5.9	6010C	12-19-17	12-19-17	
Lab ID:	12-198-07					
Client ID:	**37@2'**					
Lead	**220**	5.8	6010C	12-19-17	12-19-17	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-19-17
Date Analyzed:	12-19-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1219SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 12-19-17
Date Analyzed: 12-19-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-187-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 12-19-17
Date Analyzed: 12-19-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 12-187-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**231**	92	**242**	97	5	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 21, 2017
Samples Submitted: December 19, 2017
Laboratory Reference: 1712-198
Project: 37018

% MOISTURE

Date Analyzed: 12-19-17

Client ID	Lab ID	% Moisture
31@2'	12-198-01	10
32@2'	12-198-02	5
33@2'	12-198-03	11
34@2'	12-198-04	16
35@2'	12-198-05	8
36@1'	12-198-06	15
37@2'	12-198-07	14

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENVIRONMENTAL
Project Number: 37018
Project Name: National Metals Auto
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☒ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-198

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total lead				% Moisture
1	31 @ 2'	12/19/17		S	1																		X				X
2	32 @ 2'				1																		X				
3	33 @ 2'				1																		X				
4	34 @ 2'				1																		X				
5	35 @ 2'				1																		X				
6	36 @ 1'				1																		X				
7	37 @ 2'				1																		X				

	Signature	Company	Date	Time
Relinquished	[signature]	Galloway Env.	12/19/17	12:20
Received	[signature]	OSE	12/19/17	1220
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 19, 2018

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 37018
Laboratory Reference No. 1801-199

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on January 18, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

Case Narrative

Samples were collected on January 17, 2018 and received by the laboratory on January 18, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	01-199-01					
Client ID:	**38@3'**					
Lead	**ND**	6.3	6010C	1-18-18	1-18-18	
Lab ID:	01-199-02					
Client ID:	**39@4'**					
Lead	**ND**	6.6	6010C	1-18-18	1-18-18	
Lab ID:	01-199-03					
Client ID:	**40@3'**					
Lead	**12**	6.0	6010C	1-18-18	1-18-18	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-18-18
Date Analyzed:	1-18-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0118SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 1-18-18
Date Analyzed: 1-18-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 01-199-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 1-18-18
Date Analyzed: 1-18-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 01-199-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**237**	95	**243**	97	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 19, 2018
Samples Submitted: January 18, 2018
Laboratory Reference: 1801-199
Project: 37018

% MOISTURE

Date Analyzed: 1-18-18

Client ID	Lab ID	% Moisture
38@3'	01-199-01	20
39@4'	01-199-02	25
40@3'	01-199-03	16

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GALLOWAY ENV. INC.
Project Number: 37018
Project Name: National Auto Ports
Project Manager: Gary Galloway
Sampled by: Gary Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☒ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 01-199

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Lead				% Moisture
1	38 @ 3'	1-17-18		S	1																		X				X
2	39 @ 4'	1-17-18		S	1																		X				X
3	40 @ 3'	1-17-18		S	1																		X				X

	Signature	Company	Date	Time
Relinquished		Galloway ENV.	1-18-18	14:00
Received		Onite Ex	1/18/18	1400
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 8, 2021

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street
Suite B1, 617
Bellevue WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 2104-056

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on April 7, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

Case Narrative

Samples were collected on April 7, 2021 and received by the laboratory on April 7, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A6-12.5A-EX:1.5**					
Laboratory ID:	04-056-01					
Lead	**19**	5.6	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A6-12.5A-EX:2.0**					
Laboratory ID:	04-056-02					
Lead	**ND**	6.1	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A6-12.5A-EX:1.25-W**					
Laboratory ID:	04-056-03					
Lead	**210**	5.6	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A6-12.5A-EX:1.25-S**					
Laboratory ID:	04-056-04					
Lead	**64**	5.7	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A6-12.5A-EX:1.25-E**					
Laboratory ID:	04-056-05					
Lead	**11**	5.6	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-3A-EX:1.0**					
Laboratory ID:	04-056-06					
Lead	**50**	5.7	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-3A-EX:2.0**					
Laboratory ID:	04-056-07					
Lead	**27**	5.4	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-3A-EX:1.5-S**					
Laboratory ID:	04-056-08					
Lead	**66**	5.6	EPA 6010D	4-8-21	4-8-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-3A-EX:1.5-N**					
Laboratory ID:	04-056-09					
Lead	**420**	5.7	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-3A-EX:1.5-W**					
Laboratory ID:	04-056-10					
Lead	**96**	5.6	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-3A-EX:0.5-E**					
Laboratory ID:	04-056-11					
Lead	**58**	6.1	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-4A-EX:2.0**					
Laboratory ID:	04-056-12					
Cadmium	**1.7**	0.58	EPA 6010D	4-8-21	4-8-21	
Lead	**1200**	5.8	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-4A-EX:5.0**					
Laboratory ID:	04-056-13					
Cadmium	**2.0**	0.61	EPA 6010D	4-8-21	4-8-21	
Lead	**1600**	6.1	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-4A-EX:3.0-S**					
Laboratory ID:	04-056-14					
Cadmium	**2.1**	0.58	EPA 6010D	4-8-21	4-8-21	
Lead	**1300**	5.8	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-4A-EX:1.0-E**					
Laboratory ID:	04-056-15					
Cadmium	**0.57**	0.56	EPA 6010D	4-8-21	4-8-21	
Lead	**370**	5.6	EPA 6010D	4-8-21	4-8-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-4A-EX:2.0-W**					
Laboratory ID:	04-056-16					
Cadmium	**1.7**	0.60	EPA 6010D	4-8-21	4-8-21	
Lead	**1000**	6.0	EPA 6010D	4-8-21	4-8-21	
Client ID:	**A8-4A-EX:3.0-N**					
Laboratory ID:	04-056-17					
Cadmium	**0.75**	0.58	EPA 6010D	4-8-21	4-8-21	
Lead	**250**	5.8	EPA 6010D	4-8-21	4-8-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0408SM1					
Cadmium	**ND**	0.50	EPA 6010D	4-8-21	4-8-21	
Lead	**ND**	5.0	EPA 6010D	4-8-21	4-8-21	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-056-01										
	ORIG	DUP									
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**17.1**	**11.3**	NA	NA		NA		NA	41	20	C
MATRIX SPIKES											
Laboratory ID:	04-056-01										
	MS	MSD	MS	MSD		MS	MSD				
Cadmium	**47.3**	**47.6**	50.0	50.0	ND	**95**	**95**	75-125	1	20	
Lead	**261**	**262**	250	250	17.1	**98**	**98**	75-125	0	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 8, 2021
Samples Submitted: April 7, 2021
Laboratory Reference: 2104-056
Project: 37018

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A6-12.5A-EX:1.5	04-056-01	**10**	4-7-21
A6-12.5A-EX:2.0	04-056-02	**18**	4-7-21
A6-12.5A-EX:1.25-W	04-056-03	**11**	4-7-21
A6-12.5A-EX:1.25-S	04-056-04	**12**	4-7-21
A6-12.5A-EX:1.25-E	04-056-05	**10**	4-7-21
A8-3A-EX:1.0	04-056-06	**13**	4-7-21
A8-3A-EX:2.0	04-056-07	**7**	4-7-21
A8-3A-EX:1.5-S	04-056-08	**11**	4-7-21
A8-3A-EX:1.5-N	04-056-09	**13**	4-7-21
A8-3A-EX:1.5-W	04-056-10	**10**	4-7-21
A8-3A-EX:0.5-E	04-056-11	**18**	4-7-21
A8-4A-EX:2.0	04-056-12	**14**	4-7-21
A8-4A-EX:5.0	04-056-13	**19**	4-7-21
A8-4A-EX:3.0-S	04-056-14	**14**	4-7-21
A8-4A-EX:1.0-E	04-056-15	**11**	4-7-21
A8-4A-EX:2.0-W	04-056-16	**16**	4-7-21
A8-4A-EX:3.0-N	04-056-17	**14**	4-7-21

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: Natural
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☒ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 04-056

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead	Cadmium			% Moisture
1	A6-12.5A-EX:1.5	4/7/21	1040	S	1																		X				X
2	A6-12.5A-EX:2.0		1045		1																		X				X
3	A6-12.5A-EX:1.25-W		1048		1																		X				X
4	A6-12.5A-EX:1.25-S		1053		1																		X				X
5	A6-12.5A-EX:1.25-E		1057		1																		X				X
6	A8-3A-EX:1.0		1110		1																		X				X
7	A8-3A-EX:2.0		1114		1																		X				X
8	A8-3A-EX:1.5-S		1119		1																		X				X
9	A8-3A-EX:1.5-N		1123		1																		X				X
10	A8-3A-EX:1.5-W		1125		1																		X				X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	4/7/21	1444
Received	[signature]	OSE	4/7/21	1444
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days) (Check One): ☒ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☐ _____ (other)

Laboratory Number: 04-056

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead	Cadmium			% Moisture
11	AS-3A-EX: 0.5-E	4/7/21	1129	S	1																		X				X
12	AS-4A-EX: 2.0		1150		1																		X	X			X
13	AS-4A-EX: 5.0		1155		1																		X	X			X
14	AS-4A-EX: 3.0-S		1159		1																		X	X			X
15	AS-4A-EX: 1.0-E		1204		1																		X	X			X
16	AS-4A-EX: 2.0-W		1208		1																		X	X			X
17	AS-4A-EX: 3.0-N		1212		1																		X	X			X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	4/7/21	1444
Received	Nicole [signature]	OSE	4/7/21	1444
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 12, 2021

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street
Suite B1, 617
Bellevue WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 2104-074

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on April 9, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 12, 2021
Samples Submitted: April 9, 2021
Laboratory Reference: 2104-074
Project: 37018

Case Narrative

Samples were collected on April 9, 2021 and received by the laboratory on April 9, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Lead is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

The Matrix Spike/ Matrix Spike Duplicate recoveries for Lead are outside control limits due to matrix inhomogeneity . The samples were re-extracted and re-analyzed with similar results. The Spike Blank recovery was 100%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 12, 2021
Samples Submitted: April 9, 2021
Laboratory Reference: 2104-074
Project: 37018

TOTAL LEAD
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-3A-EX:1.5-N,2**					
Laboratory ID:	04-074-01					
Lead	**620**	5.7	EPA 6010D	4-12-21	4-12-21	
Client ID:	**A8-4A-EX:3.0-N,2**					
Laboratory ID:	04-074-02					
Lead	**19**	5.9	EPA 6010D	4-12-21	4-12-21	
Client ID:	**A8-4A-EX:1.0-E,2**					
Laboratory ID:	04-074-03					
Lead	**42**	6.2	EPA 6010D	4-12-21	4-12-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 12, 2021
Samples Submitted: April 9, 2021
Laboratory Reference: 2104-074
Project: 37018

TOTAL LEAD
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412SM1					
Lead	**ND**	5.0	EPA 6010D	4-12-21	4-12-21	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-074-01										
	ORIG	DUP									
Lead	**542**	**418**	NA	NA		NA		NA	26	20	K
MATRIX SPIKES											
Laboratory ID:	04-074-01										
	MS	MSD	MS	MSD		MS	MSD				
Lead	**580**	**555**	250	250	542	**15**	**5**	75-125	4	20	V

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 12, 2021
Samples Submitted: April 9, 2021
Laboratory Reference: 2104-074
Project: 37018

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A8-3A-EX:1.5-N,2	04-074-01	**13**	4-9-21
A8-4A-EX:3.0-N,2	04-074-02	**15**	4-9-21
A8-4A-EX:1.0-E,2	04-074-03	**19**	4-9-21

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National
Project Manager: D. Galloway
Sampled by: D. Galloway

Turnaround Request (in working days)
(Check One)
☑ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 04-074

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead				% Moisture
1	AS-3A-EX: 1.5-N, 2	4/9/21	1435	S	1																		X				D
2	AS-4A-EX: 3.0-N, 2	↓	1440	S	1																		X				1
3	AS-4A-EX: 1.0-E, 2	↓	1445	S	1																		X				1

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	4/9/21	1558
Received	Nicholas Shin	OSE	4/9/21	1558
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 13, 2021

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street
Suite B1, 617
Bellevue WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 2104-085

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on April 12, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-085
Project: 37018

Case Narrative

Samples were collected on April 12, 2021 and received by the laboratory on April 12, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-085
Project: 37018

TOTAL LEAD
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-3A:SP**					
Laboratory ID:	04-085-01					
Lead	**290**	5.7	EPA 6010D	4-13-21	4-13-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-085
Project: 37018

TOTAL LEAD
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413SM1					
Lead	**ND**	5.0	EPA 6010D	4-13-21	4-13-21	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-086-01										
	ORIG	DUP									
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-086-01										
	MS	MSD	MS	MSD		MS	MSD				
Lead	**243**	**242**	250	250	ND	**97**	**97**	75-125	1	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-085
Project: 37018

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A8-3A:SP	04-085-01	**13**	4-12-21

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: Natural
Project Manager: Dylan Galloway
Sampled by: Dylan Galloway

Turnaround Request (in working days)
(Check One)
☐ ~~Same Day~~ ☒ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 04-085

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead Cadmium DB 4/12/21			% Moisture
1	A8-3A:SP	4/12/21	1010	S	1																		X			X

	Signature	Company	Date	Time
Relinquished		GEI	4/12/21	1528
Received		OSE	4/12/21	1528
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 13, 2021

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street
Suite B1, 617
Bellevue WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 2104-086

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on April 12, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-086
Project: 37018

Case Narrative

Samples were collected on April 12, 2021 and received by the laboratory on April 12, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-086
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-4A-EX:5.75,2**					
Laboratory ID:	04-086-01					
Cadmium	**ND**	0.62	EPA 6010D	4-13-21	4-13-21	
Lead	**ND**	6.2	EPA 6010D	4-13-21	4-13-21	
Client ID:	**A8-4A-EX:3.0-S,2**					
Laboratory ID:	04-086-02					
Cadmium	**1.4**	0.58	EPA 6010D	4-13-21	4-13-21	
Lead	**780**	5.8	EPA 6010D	4-13-21	4-13-21	
Client ID:	**A8-4A-EX:5.5,2**					
Laboratory ID:	04-086-03					
Cadmium	**ND**	0.66	EPA 6010D	4-13-21	4-13-21	
Lead	**ND**	6.6	EPA 6010D	4-13-21	4-13-21	
Client ID:	**A8-4A-EX:2.0-W,2**					
Laboratory ID:	04-086-04					
Cadmium	**ND**	0.61	EPA 6010D	4-13-21	4-13-21	
Lead	**ND**	6.1	EPA 6010D	4-13-21	4-13-21	

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Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-086
Project: 37018

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413SM1					
Cadmium	**ND**	0.50	EPA 6010D	4-13-21	4-13-21	
Lead	**ND**	5.0	EPA 6010D	4-13-21	4-13-21	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-086-01										
	ORIG	DUP									
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-086-01										
	MS	MSD	MS	MSD		MS	MSD				
Cadmium	**47.3**	**46.6**	50.0	50.0	ND	**95**	**93**	75-125	1	20	
Lead	**243**	**242**	250	250	ND	**97**	**97**	75-125	1	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 13, 2021
Samples Submitted: April 12, 2021
Laboratory Reference: 2104-086
Project: 37018

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A8-4A-EX:5.75,2	04-086-01	**20**	4-12-21
A8-4A-EX:3.0-S,2	04-086-02	**13**	4-12-21
A8-4A-EX:5.5,2	04-086-03	**24**	4-12-21
A8-4A-EX:2.0-W,2	04-086-04	**19**	4-12-21

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National
Project Manager: Dylan Galloway
Sampled by: Dylan Galloway

Turnaround Request (in working days)
(Check One)
~~Same Day~~ ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days) ☐ _____ (other)

Laboratory Number: 04-086

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead	Cadmium			% Moisture
1	A8-4A-EX:5.75,2	4/12/21	1345	S	1																		X	X			
2	A8-4A-EX:3.0-S,2	↓	1350	↓	1																		X	X			
3	A8-4A-EX:5.5,2		1405		1																		X	X			
4	A8-4A-EX:2.0-W,2		1408		1																		X	X			

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	4/12/21	1528
Received	[signature]	OSE	4/12/21	1528
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 16, 2021

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street
Suite B1, 617
Bellevue WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 2104-136

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on April 15, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 16, 2021
Samples Submitted: April 15, 2021
Laboratory Reference: 2104-136
Project: 37018

Case Narrative

Samples were collected on April 15, 2021 and received by the laboratory on April 15, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 16, 2021
Samples Submitted: April 15, 2021
Laboratory Reference: 2104-136
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**A8-3A-EX:1.5-N,3**					
Laboratory ID:	04-136-01					
Lead	**120**	5.9	EPA 6010D	4-16-21	4-16-21	
Client ID:	**A8-4A-EX:3.0-S,3**					
Laboratory ID:	04-136-02					
Cadmium	**ND**	0.60	EPA 6010D	4-16-21	4-16-21	
Lead	**17**	6.0	EPA 6010D	4-16-21	4-16-21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 16, 2021
Samples Submitted: April 15, 2021
Laboratory Reference: 2104-136
Project: 37018

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0416SM1					
Cadmium	**ND**	0.50	EPA 6010D	4-16-21	4-16-21	
Lead	**ND**	5.0	EPA 6010D	4-16-21	4-16-21	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-136-01										
	ORIG	DUP									
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**101**	**84.8**	NA	NA		NA		NA	17	20	
MATRIX SPIKES											
Laboratory ID:	04-136-01										
	MS	MSD	MS	MSD		MS	MSD				
Cadmium	**46.5**	**46.5**	50.0	50.0	ND	**93**	**93**	75-125	0	20	
Lead	**333**	**337**	250	250	101	**93**	**94**	75-125	1	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 16, 2021
Samples Submitted: April 15, 2021
Laboratory Reference: 2104-136
Project: 37018

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A8-3A-EX:1.5-N,3	04-136-01	**15**	4-15-21
A8-4A-EX:3.0-S,3	04-136-02	**16**	4-15-21

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

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L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc.
Project Number: 37018
Project Name: Natural
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☒ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 04-136

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Total Lead	Cadmium			% Moisture
1	A8-3A-EX:1.5-N,3	4/15/21	1515	S	1																		X				X
2	A8-4A-EX:3.0-S,3	4/15/21	1455	S	1																		X	X			↓

	Signature	Company	Date	Time
Relinquished		GEI	4/15/21	1630
Received		OSE	4/15/21	1630
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

APPENDIX F

QUARTERLY GROUNDWATER MONITORING REPORTS

GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

November 7, 2018

Sunset Chevrolet, Inc.
Mitchell Development
Attn: Ms. Christi Acuna
910 Traffic Avenue
Sumner, WA 98390

E-mailed to: CristiAcuna@SunsetChev.com

SUBJECT: GROUNDWATER MONITORING WELL INSTALLATION, SAMPLING, AND ANALYSIS REPORT FOR THE NATIONAL AUTO PARTS PROPERTY AT 16008 60TH STREET EAST, SUMNER, WASHINGTON 98390

Dear Ms. Acuna:

This letter report presents Galloway Environmental, Inc.'s (GEI's) findings from recent installation of six groundwater monitoring wells and the sampling of seven groundwater monitoring wells at the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington (hereafter referred to as "t*he Property*."

The Property is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Property as parcel numbers 0520198006 and 2006198700. Parcel 0520198006 is listed as "Phil's Speed Shop, LLC" which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse. Parcel 2006198700 is listed as "Sumner National Auto Parts, Inc" and does not have acreage listed.

This work was conducted as a continuance to an independent remedial action undertaken by GEI for Mr. Phil Mitchell with the primary goal to evaluate groundwater conditions upgradient and downgradient of the former source area of contamination to confirm the effectiveness of the recent Independent Remedial Action on the Property.

BACKGROUND

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop since the facility was constructed in 1979 until it was recently closed. The machine shop area occupied approximately 4,500 sf and the retail sales and storage area occupied approximately 3,000 sf.

Reportedly, an unknown amount of spent parts cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the building near the structure's exterior door. The Washington State Department of Ecology (Ecology) responded to a citizen complaint regarding the spill and determined that the Property was impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "Work Plan."

Between October 2017 and January 2018, a remedial excavation was conducted at the Property in general accordance with the Work Plan. The primary objective of remediating the Property was to ensure the protection of human health and the environment.

The remedial excavation generally included the removal of 262.92 tons of impacted soils. The excavated soil was transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington

under the Waste Disposal Authorization (WDA) number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of concern (COCs) from the final limits of excavation (confirmation samples).

Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been satisfactorily removed from the Property.

GROUNDWATER MONITOR WELL INSTALLATION

Between August 13, 2018 and August 14, 2018, GEI oversaw the installation of six groundwater monitoring wells at the Property. One pre-existing well (MW-1), situated in the central region of the Property, was installed on October 30, 2015. The six additional wells (MW-2 through MW-7) were installed in general accordance with the Work Plan and GEI's proposal number 2709.03, dated September 7, 2017. The installation included one well in the western perimeter of the property (MW-2), two north of the remedial excavation area (MW-3 and MW-4), two east of the remedial excavation area (MW-5 and MW-6), and one in the upgradient position (MW-7). The locations are depicted in Figure 2 of Attachment 1 of this report.

At each well location, Cascade Drilling, LP (Cascade) advanced a 8-inch diameter, hollow-stem auger to their planned terminal depths then developed each by using a combination of surging and evacuation with a submersible pump and dedicated disposable tubing. The details of the construction and development of each well is presented in the table below:

Well Number	Total Depth (feet bgs)[1]	Screen Interval (feet)	Sandpack Interval (feet)	Depth to Water (feet)	Approximate Development Volume (gallons)
MW-2	13.81	3.81 – 13.81	1.75 – 14.0	5.53	15
MW-3	13.64	3.64 - 13.64	1.65 – 14.0	5.91	15
MW-4	13.80	3.80 - 13.80	1.75 – 14.0	5.68	15
MW-5	14.30	4.30 - 14.30	2.25 – 14.5	5.67	15
MW-6	14.12	4.12 - 14.12 -	2.0 – 14.5	5.58	15
MW-7	13.87	3.87 – 13.87	1.75 – 14.0	5.25	15

* NOTES:
1 - The depths are based on the ground surface at time of drilling.

According to construction details included in Appendix C of the Work Plan, MW-1 was constructed of 1-inch diameter, schedule 40 polyvinyl chloride (PVC) with 5-feet of 20-slot (0.020-inch) well screens and solid PVC risers from the top of screen to just below the ground surface. The remaining wells were constructed of 2-inch diameter, schedule 40 PVC with 10-feet of 10-slot (0.020-inch) well screens and solid PVC risers from the top of screen to just below the ground surface. A minimum annular spacing of at least 2-inches of filter pack sand (e.g., Cemex Sand #2/12) was installed from the bottom of the borehole to approximately two-feet above the top of the well screen. A subsurface seal, comprised of hydrated bentonite was then installed from the top of filter pack to approximately 1.5- to 2-feet bgs. A cement grout securing the well was then installed from approximately to the existing ground surface at the time of installation.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated photoionization detector [PID]) readings. GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. At each sample point, Cascade advanced an 18-inch long split spoon sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied glass containers.

Sample Identification

All samples were individually labeled and noted in the field logbook. Sample numbers coincide with the well numbers. For example, soil sample number MW-2@5 was collected from the boring advanced for well number MW-2 at a depth of 5-feet bgs.

Chemical Analysis of Soil Samples

In accordance with the Work Plan and Ecology's Opinion Letter dated July 12, 2017, GEI submitted the soil samples to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) to test for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals (arsenic, barium, cadmium, chromium, and lead).

Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels. These are further discussed below and presented in Table 1 (Attachment 2). The laboratory analytical report is attached as Appendix B.

Petroleum Hydrocarbons and Polychlorinated Biphenyls

Laboratory analysis of the soil samples collected during the drilling activities did not result in the detections of petroleum hydrocarbons or polychlorinated biphenyls (PCBs) at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs) in any of the soil samples analyzed.

Volatile Organic Compounds

Laboratory analysis did result in the detection of acetone in all soil samples at concentration ranging from 0.0084 mg/kg to 0.095 mg/kg, below the MTCA Method B Cleanup Level of 72,000 mg/kg. 2-Butanone (methyl ethyl ketone) was detected in the soil sample collected from MW-2 at a depth of 5-feet bgs at a concentration of 0.018 mg/kg, below the MTCA Method B Cleanup Level of 48,000 mg/kg. Xylenes were detected in the soil sample collected from MW-5 at a depth of 4.5-feet bgs at a concentration of 0.0154 mg/kg, below the MTCA Method A Cleanup Level of 9.0 mg/kg.

Polycyclic Aromatic Hydrocarbons

Phenanthrene was detected in the soil sample collected from MW-2 at a depth of 5-feet bgs and in the soil sample collected from MW-7 at a depth of 4.8-feet bgs at concentrations of 0.010 and 0.015 mg/kg, respectively. There is currently no MTCA Cleanup Value established for phenanthrene in soil. Fluoranthrene was detected in the soil sample collected from MW-7 at a depth of 4.8-feet bgs at a concentration of 0.013 mg/kg, below the MTCA Method B Cleanup Level of 3,200 mg/kg. Pyrene was detected in the soil sample collected from MW-7 at a depth of 4.8-feet bgs at a concentration of 0.011 mg/kg, below the MTCA Method B Cleanup Level of 2,400 mg/kg.

Metals

Barium was detected in all soil samples at concentrations ranging from 19 mg/kg to 49 mg/kg, below the MTCA Method B Cleanup Level of 16,000 mg/kg. Chromium was detected in all soil samples at concentrations ranging from 13 mg/kg to 20 mg/kg, below the MTCA Method A Cleanup Level of 2,000 mg/kg.

Laboratory analysis did not result in a detection of any other analytes at concentrations equal to or exceeding their respective laboratory PQLs in any of the soil samples analyzed.

GROUNDWATER MONITORING

In accordance with Ecology's Opinion Letter, dated July 12, 2018, GEI collected groundwater samples from each well two weeks after construction of the wells. On August 31, 2018, GEI gauged the wells for depth-to-water and the total depth to calculate the groundwater elevation and flow direction. The measurements were made from the northernmost point of each well casing. Based on these data, the inferred groundwater flow direction at the time of sampling event is to the northwest.

Immediately after gauging the wells, GEI purged a minimum of three well casing volumes from each well using a low-flow peristaltic pump with dedicated disposable tubing which directed the water into Department of Transportation (DOT) approved steel drums, pending laboratory analysis. Water quality parameters were measured during purging and recorded in field data sheets (Appendix A).

GEI then collected groundwater samples from each well using a low-flow peristaltic pump with dedicated disposable tubing which directed the samples into new laboratory supplied glass containers.

Chemical Analysis of Groundwater Samples

In accordance with the Work Plan and Ecology's Opinion Letter dated July 12, 2017, GEI submitted the groundwater samples to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium.

Sample Handling, Storage, and Shipment

The samples were packaged properly according to the current DOT requirements. Ice was added to ensure that the samples were kept at approximately 4 degrees Celsius (˚C). The samples were kept chilled between the time of the sampling and the time of the analytical processing.

The samples were hand-delivered to the analytical laboratory on their collection date under proper chain-of-custody protocols on the same day as collection. A field logbook documented the field activities, observations, and other relevant information regarding the sampling.

Equipment Decontamination

The samples were collected at each sample location using procedures designed to minimize the risk of cross contamination of the samples. All sampling equipment that could come into direct contact with sample media was decontaminated before starting work and between each sampling location. The following procedure was used for cleaning all sampling equipment:

- Remove gross contamination by brushing/wiping and rinsing with potable water.
- Wash and scrub with laboratory grade detergent (i.e., Aquinox®).
- Rinse with distilled water.
- Air dried.

Groundwater Sample Analytical Results

Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels with exception to dissolved and total arsenic. These are further discussed below and presented in Table 2 (Attachment 2). The laboratory analytical report is attached as Appendix B.

Petroleum Hydrocarbons and Polychlorinated Biphenyls

Laboratory analysis did not result in the detections of petroleum hydrocarbons or PCBs at concentrations equal to or exceeding their respective laboratory PQLs in any of the groundwater samples analyzed.

Volatile Organic Compounds

Laboratory analysis did not result in the detections of VOCs at concentrations equal to or exceeding their respective laboratory PQLs in any of the groundwater samples analyzed.

Polycyclic Aromatic Hydrocarbons

Laboratory analysis did not result in the detections of PAHs at concentrations equal to or exceeding their respective laboratory PQLs in any of the groundwater samples analyzed.

Metals

Dissolved arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 9.0 micrograms per liter (μg/L), 5.4 μg/L, and 5.9 μg/L, respectively. Total arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 12.0 μg/L, 5.8 μg/L, and 6.4 μg/L, respectively. All detections slightly exceed the MTCA Method A Cleanup Level of 5.0 μg/L.

Dissolved barium was detected in the groundwater samples collected from MW-2 through MW-7 at concentrations ranging from 32 μg/L to 52 μg/L. Total barium was detected in the groundwater samples collected from MW-2 through MW-7 at concentrations ranging from 34 μg/L to 69 μg/L. All detections were below the MTCA Method B Cleanup Level of 3,200 μg/L.

Laboratory analysis did not result in a detection of any other analytes at concentrations equal to or exceeding their respective laboratory PQLs in any of the groundwater samples analyzed

CONCLUSIONS AND RECOMMENDATIONS

Based on laboratory analyses, the groundwater in monitoring wells MW-3, MW-5, and MW-7 were confirmed to have concentrations of arsenic at levels exceeding its respective MTCA Method A Cleanup Action Level of

5.0 µg/L. Laboratory analyses of the soil samples collected from the boreholes which were advanced prior to the construction of the wells did not result in the detection of arsenic at concentrations equal to or exceeding the laboratory PQL. The groundwater elevations were surveyed by a licensed surveyor and concluded that the groundwater flow direction observed during this sampling event was defined to be in the northwest direction. Based on this information, it appears that the arsenic impacts to groundwater are likely from an off-site source from the south/southeast of the Property.

GEI recommends continued monitoring of the groundwater in all seven groundwater monitoring wells. If arsenic concentrations continue to be identified at levels exceeding its MTCA Method A Cleanup Action Level in the upgradient well (MW-7), further assessment may be conducted to identify the off-site source.

GEI further recommends eliminating future analyses of PAHs, PCBs, total metals, and hexavalent chromium.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact me at the addresses listed at the top of this letter.

Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA
President

ATTACHMENT 1

FIGURES

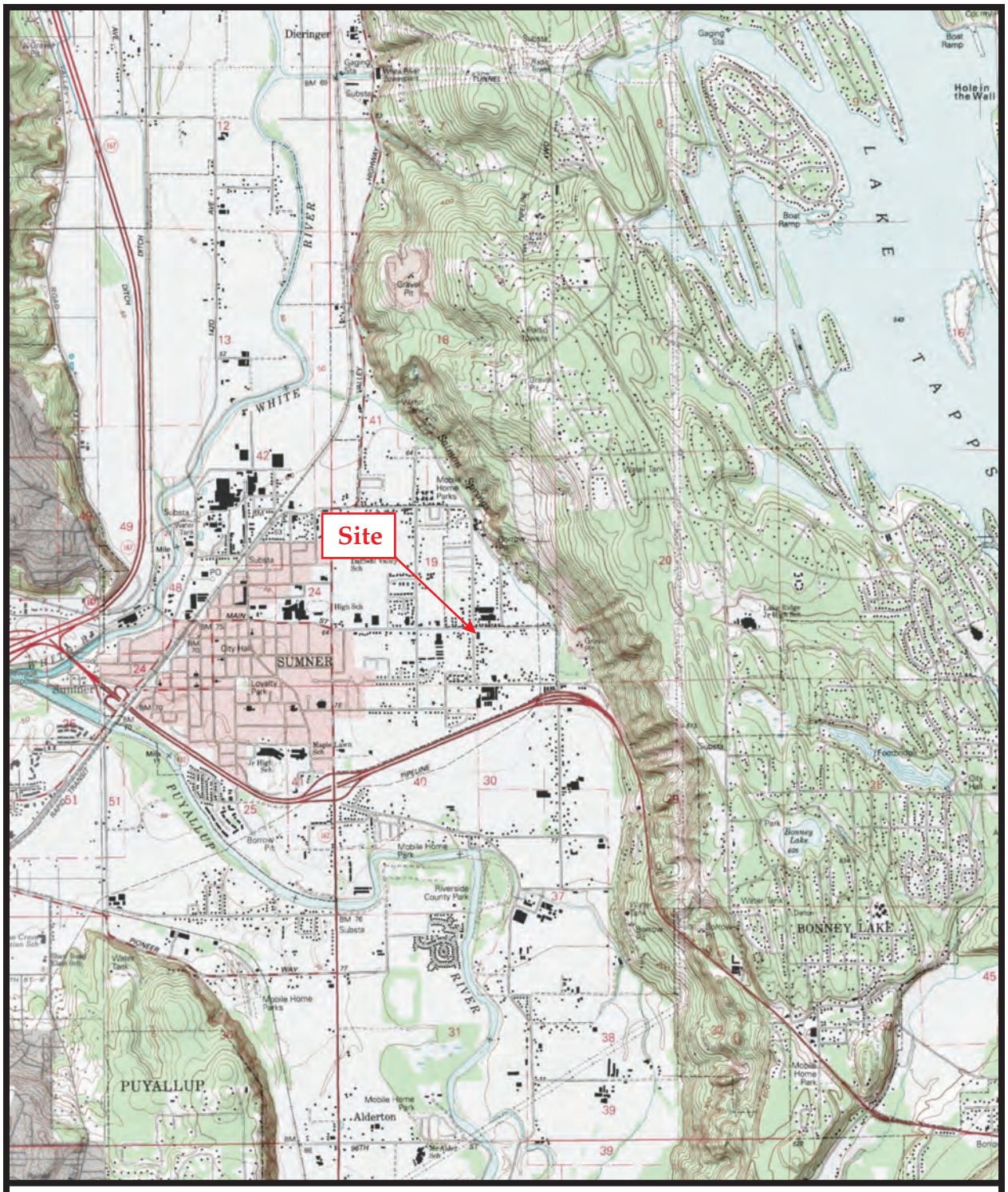


FIGURE 1 — SITE LOCATION MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: MyTopo.com, GEI Project 37018

N

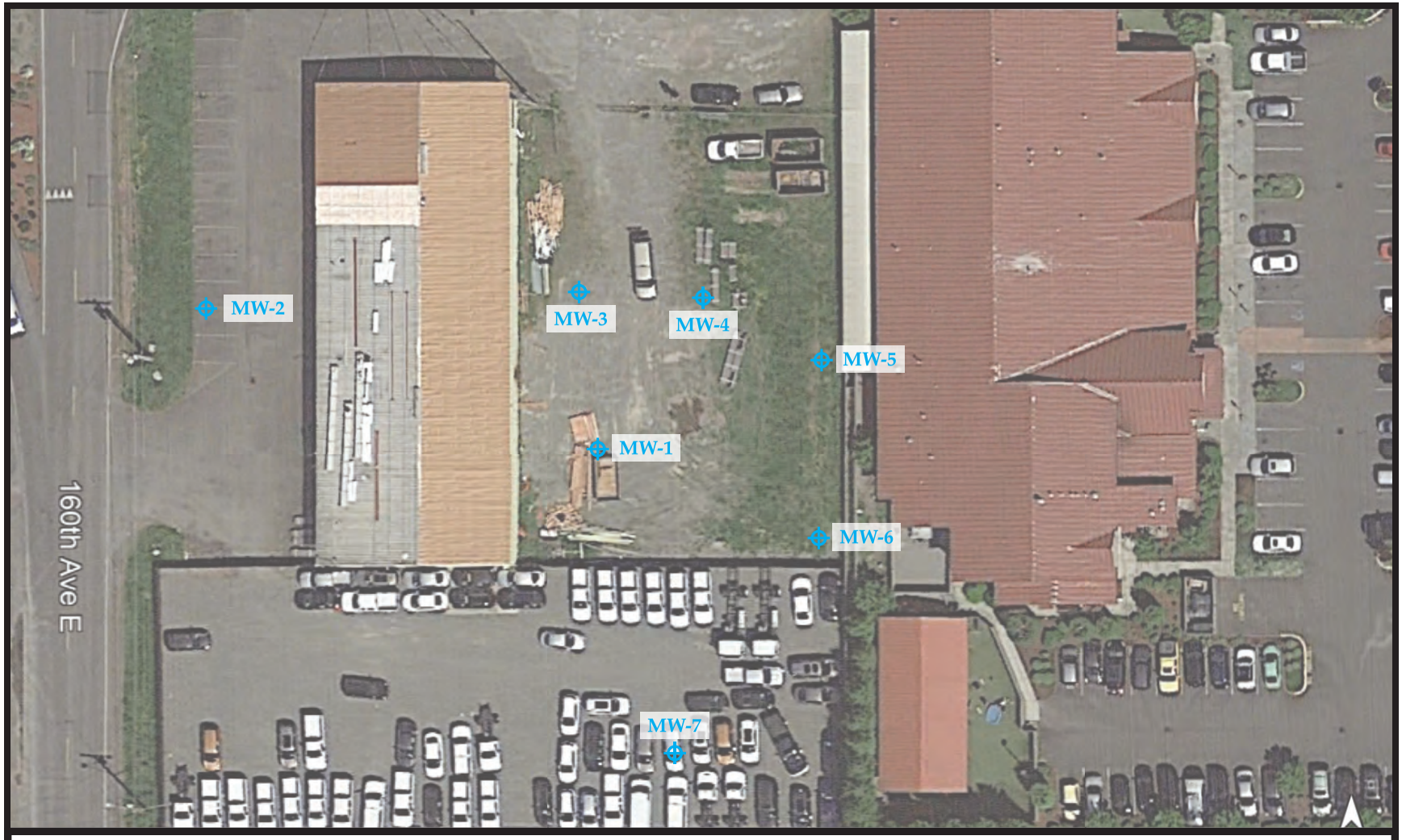


FIGURE 2—GROUNDWATER MONITORING WELL MAP
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N

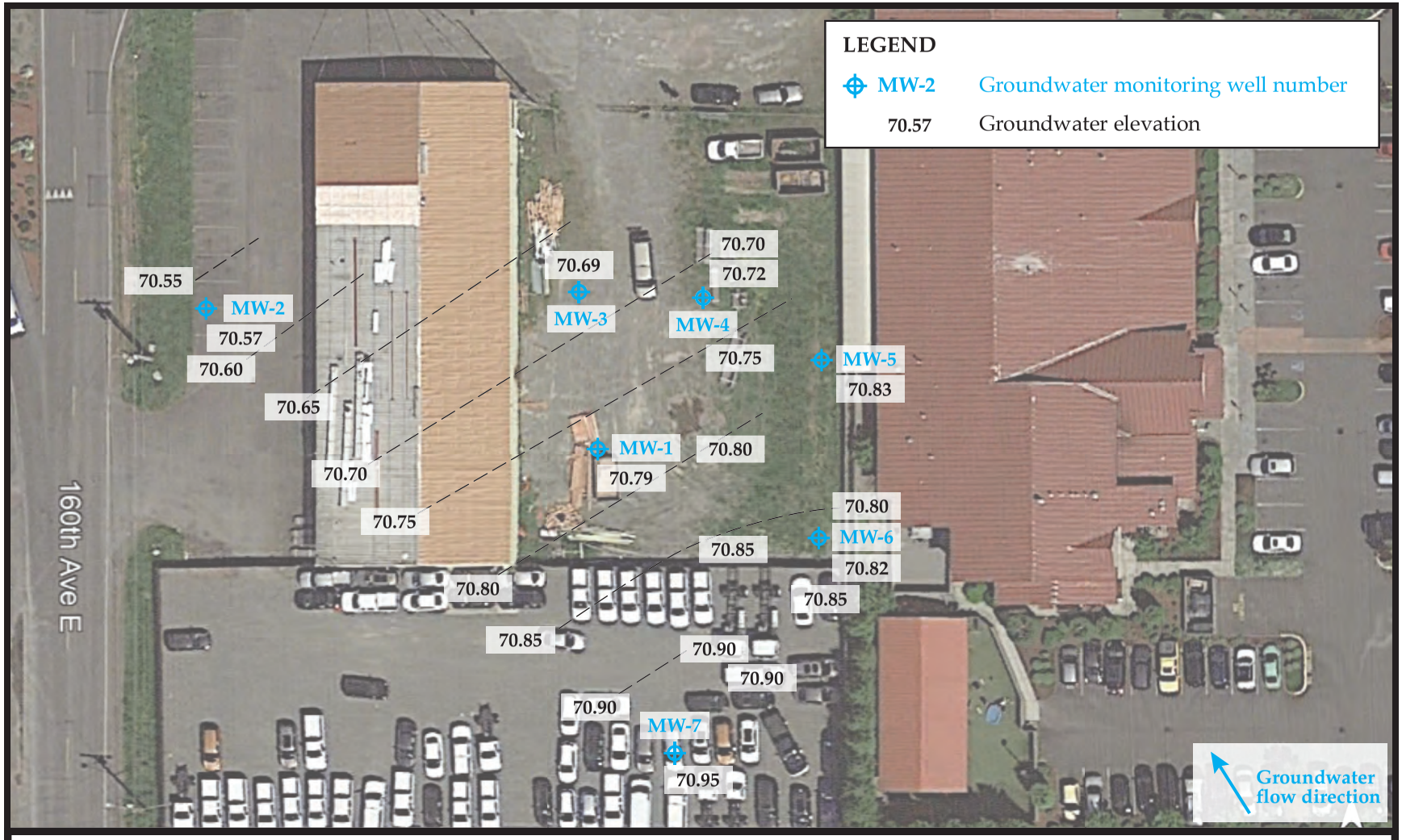


FIGURE 3—GROUNDWATER GRADIENT, AUGUST 2018
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N

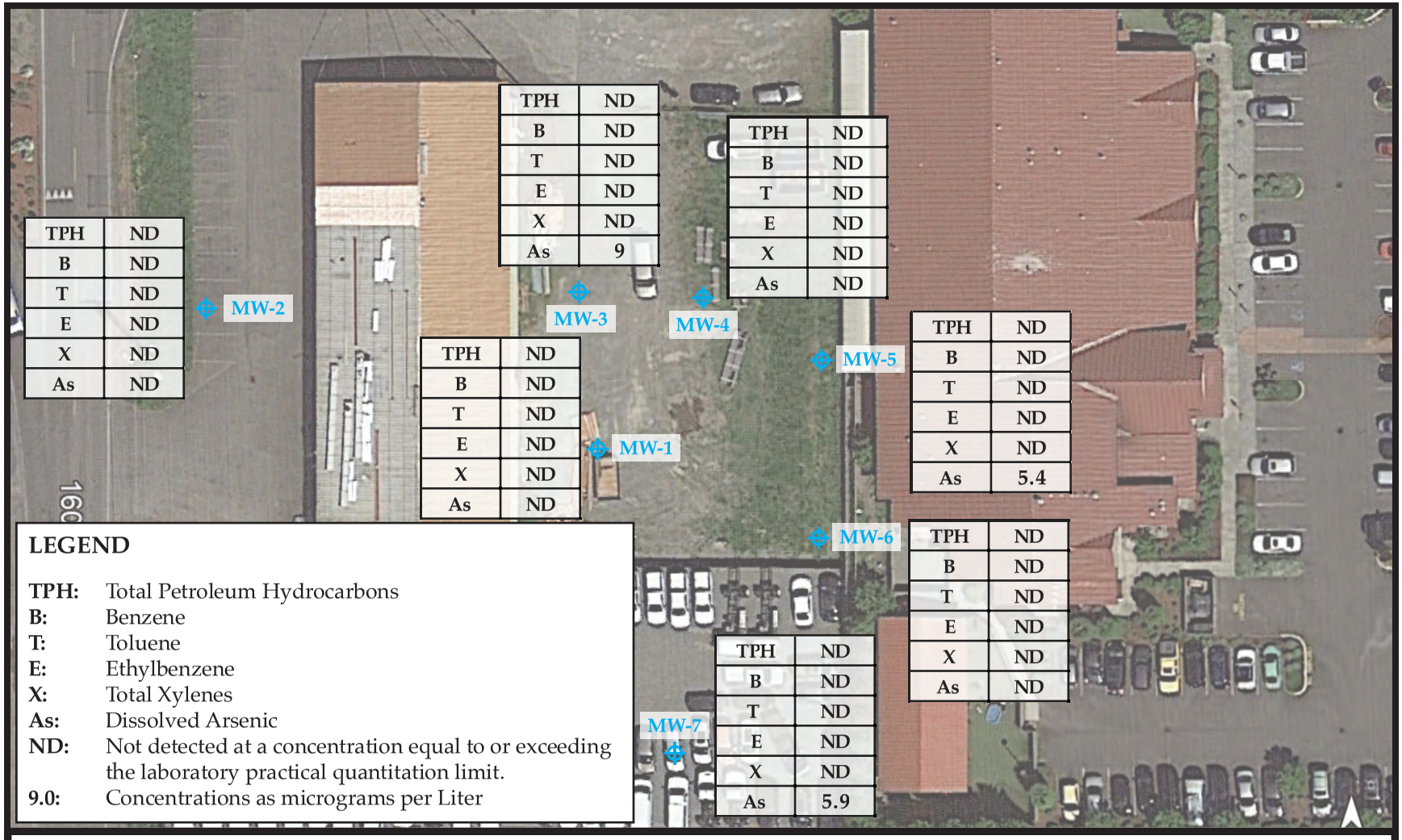


FIGURE 4—GROUNDWATER MONITORING SELECT ANALYTICAL DATA
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N

ATTACHMENT 2

ANALYTICAL TABLES

Table 1
Select Laboratory
Analytical Results
for Soil Samples
National Auto Parts
GEI Project #37018

Sample Number	Depth (feet below ground surface)	Date of Sample	Analyte																		
			Total Petroleum Hydrocarbons (mg/kg)			Volatile Organic Compounds (mg/kg)						Polycyclic Aromatic Hydrocarbons (mg/kg)			Polychlorinated Biphenyl (mg/kg)	Total Metals (mg/kg)					
			Gasoline	Diesel	Lube Oil	Acetone	2-Butanone (MEK)	Benzene	Toluene	Ethylbenzene	Xylenes	Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead	Hexavalent Chromium
MW-2@5	5.0	8/13/2018	ND <24	ND <61	ND <120	0.095	0.018	ND <0.0011	ND <0.0057	ND <0.0011	ND <0.0034	0.010	ND <0.0081	ND <0.0081	ND <0.061	ND <12	49	ND <0.61	18	ND <6.1	ND <1.2
MW-3@4.5	4.4	8/13/2018	ND <25	ND <62	ND <130	0.014	ND <0.0066	ND <0.0013	ND <0.0066	ND <0.0013	ND <0.0040	ND <0.0083	ND <0.0083	ND <0.0083	ND <0.062	ND <12	21	ND <0.62	15	ND <6.2	ND <1.2
MW-4@4.5	4.5	8/13/2018	ND <27	ND <66	ND <130	0.01	ND <0.0059	ND <0.0012	ND <0.0059	ND <0.0012	ND <0.0036	ND <0.0089	ND <0.0089	ND <0.0089	ND <0.066	ND <13	19	ND <0.66	16	ND <6.6	ND <1.3
MW-5@4.5	4.5	8/14/2018	ND <24	ND <61	ND <120	0.013	ND <0.0062	ND <0.0012	ND <0.0062	ND <0.0012	0.0154	ND <0.0081	ND <0.0081	ND <0.0081	ND <0.061	ND <12	38	ND <0.61	20	ND <6.1	ND <1.2
MW-6@4.7	4.7	8/14/2018	ND <27	ND <66	ND <130	0.0084	ND <0.0055	ND <0.0011	ND <0.0055	ND <0.0011	ND <0.0033	ND <0.0088	ND <0.0088	ND <0.0088	ND <0.066	ND <13	30	ND <0.66	16	ND <6.6	ND <1.3
MW-7@4.8	4.8	8/13/2018	ND <22	ND <55	ND <110	0.0088	ND <0.0056	ND <0.0011	ND <0.0056	ND <0.0011	ND <0.0034	0.015	0.013	0.011	ND <0.055	ND <11	19	ND <0.55	13	ND <5.5	ND <1.1
MTCA Method Action Level			**30/100[a]**	**2,000**	**2,000**	**72,000[b]**	**48,000[b]**	**0.03**	**7.0**	**6.0**	**9.0**	**NVE**	**3,200[b]**	**2,400[b]**	**1.0**	**20**	**16,000[b]**	**2.0**	**2,000[c]**	**250**	**19**

Notes:

mg/kg	Milligrams per kilogram
MEK	Methyl ethyl ketone
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
a	Model Toxics Control Act (MTCA) Method A Action Level is 30 mg/kg with benzene present and 100 mg/kg without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Cleanup Level for Chromium III
8,100	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established

Table 2
Select Laboratory
Analytical Results
for Groundwater Samples
National Auto Parts
GEI Project #37018

Sample Number	Date of Sample	Analyte																					
		Total Petroleum Hydrocarbons (mg/L)			Fuel Constituents (µg/L)				Polycyclic Aromatic Hydrocarbons			Polychlorinated Biphenyl (µg/L)	Dissolved Metals (µg/L)					Hexavalent Chromium (µg/L)	Total Metals (µg/L)				
		Gasoline	Diesel	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead		Arsenic	Barium	Cadmium	Chromium	Lead
MW-1	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	ND <25	ND <4.0	ND <10	ND <1.0	ND <10	ND <3.3	ND <28	ND <4.4	ND <11	ND <1.1
MW-2	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	39	ND <4.0	ND <10	ND <1.0	ND <10	ND <3.3	59	ND <4.4	ND <11	ND <1.1
MW-3	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.095	ND <0.095	ND <0.095	ND <0.047	**9.0**	37	ND <4.0	ND <10	ND <1.0	ND <10	**12.0**	69	ND <4.4	ND <11	ND <1.1
MW-4	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.096	ND <0.096	ND <0.096	ND <0.047	ND <3.0	40	ND <4.0	ND <10	ND <1.0	ND <10	ND <3.3	63	ND <4.4	ND <11	ND <1.1
MW-5	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	**5.4**	43	ND <4.0	ND <10	ND <1.0	ND <10	**5.8**	50	ND <4.4	ND <11	ND <1.1
MW-6	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	52	ND <4.0	ND <10	ND <1.0	ND <10	ND <3.3	57	ND <4.4	ND <11	ND <1.1
MW-7	8/31/2018	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.097	ND <0.097	ND <0.097	ND <0.047	**5.9**	32	ND <4.0	ND <10	ND <1.0	ND <10	**6.4**	34	ND <4.0	ND <10	ND <1.0
MTCA Method Action Level		**0.8/1.0[a]**	**0.5**	**0.5**	**5.0**	**1,000**	**700**	**1,000**	**NVE**	**NVE**	**480[b]**	**0.1**	**5.0/10[c]**	**3,200[b]**	**5.0**	**50**	**15**	**48**	**5.0**	**3,200[b]**	**5.0**	**50**	**15**

Notes:

mg/L	Milligrams per liter
µg/L	Micrograms per liter
a	Model Toxics Control Act (MTCA) Method A Action Level is 0.8 mg/L with benzene present and 1.0 mg/L without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Action Level is 5.0 µg/L; Ecology's Maximum Contaminant Level is 10 mg/L
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
9.0	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established

ATTACHMENT 3

SITE PHOTOGRAPHS

Project No. 37018	**Description**	Photo of the site, facing east/southeast	**Photo 1**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the eastern portion site, facing north	**Photo 2**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the existing groundwater well MW-1	**Photo 3**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

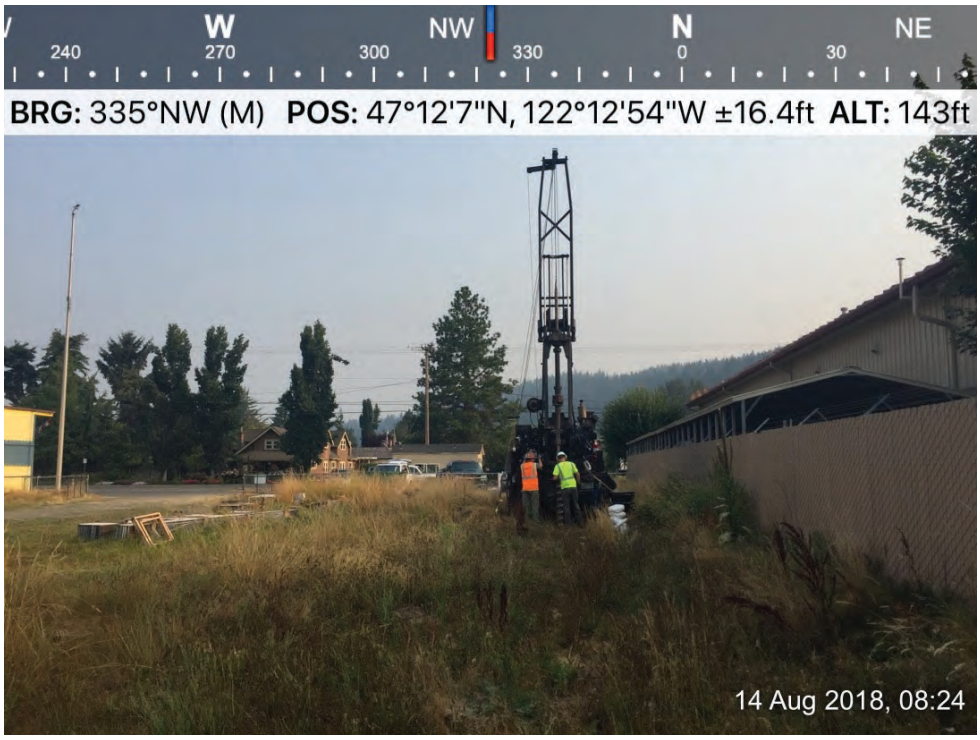
Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-2	**Photo 4**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-2	**Photo 5**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-3	**Photo 6**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-3	**Photo 7**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-4	**Photo 8**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	



Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-5	**Photo 9**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

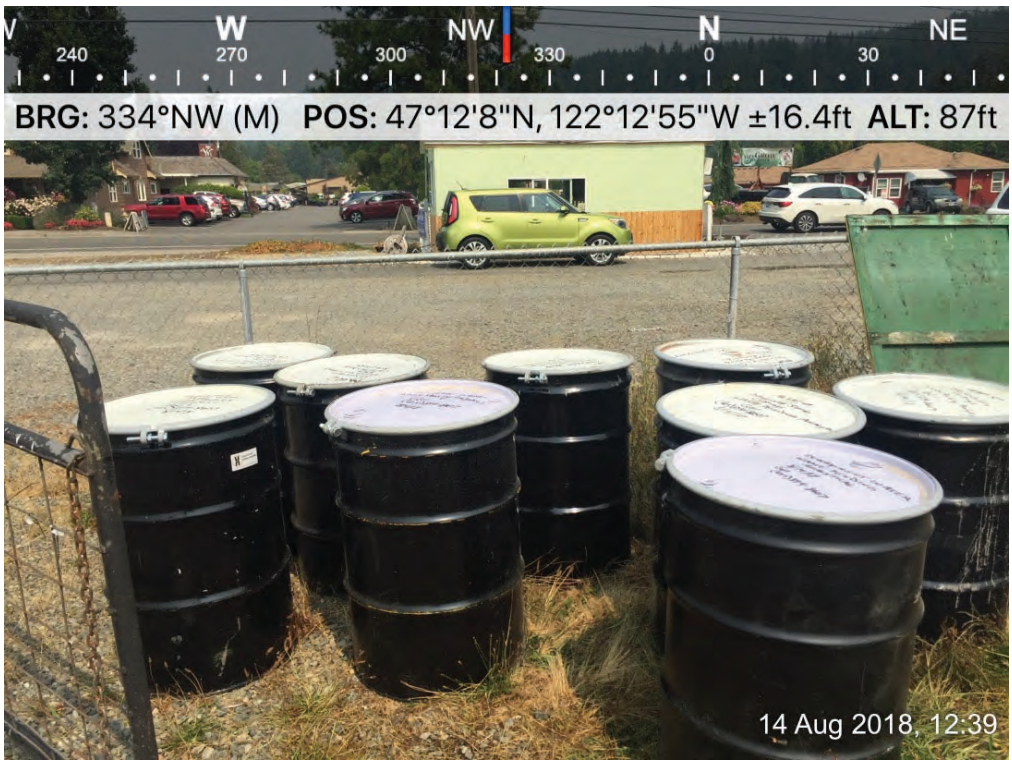
Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-5	**Photo 10**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-6	**Photo 11**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

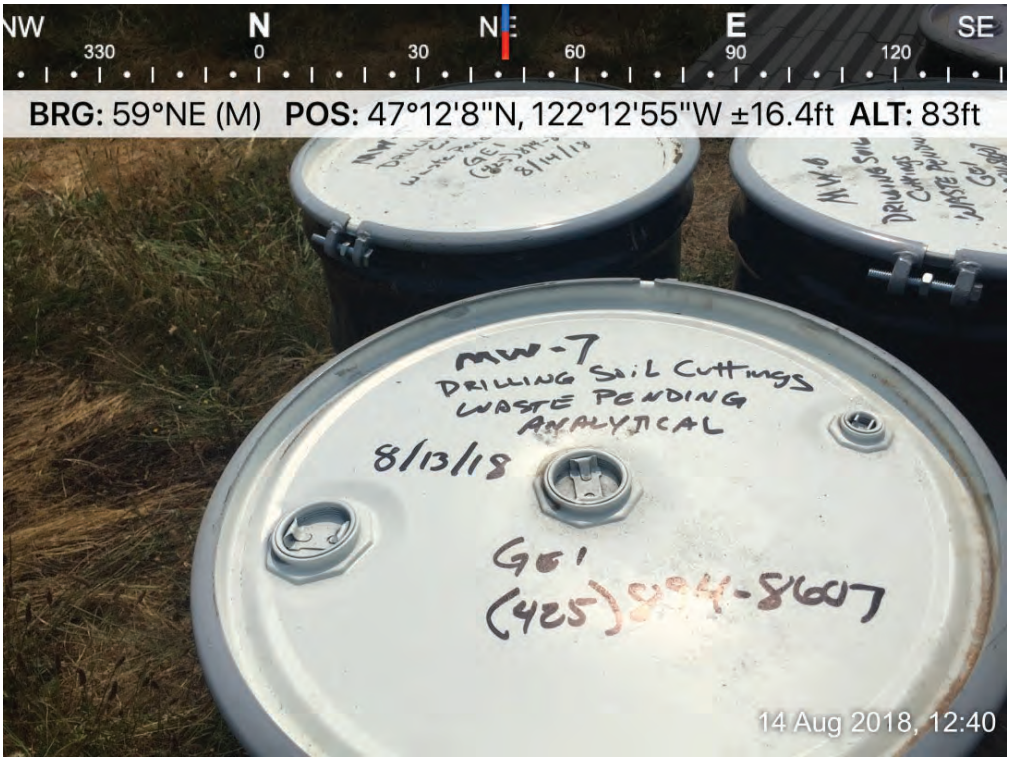
Project No. 37018	**Description**	Photo of the southern portion of the site, facing east	**Photo 12**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of the drilling to install groundwater well MW-7	**Photo 13**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	

Project No. 37018	**Description**	Photo of finished completion of groundwater well MW-7	**Photo 14**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 13, 2018
	Client	Sunset Chevrolet/Mitchell Development	



Project No. 37018	**Description**	Photo of Investigation Derived Waste (IDW)	**Photo 15**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	



Project No. 37018	**Description**	Close-up photo of Investigation Derived Waste (IDW)	**Photo 16**
	Site Name	Former National Auto Parts, 16008 60th St E, Sumner, WA	**Photo Date** August 14, 2018
	Client	Sunset Chevrolet/Mitchell Development	

APPENDIX A

FIELD FORMS

CASCADE
DRILLING | TECHNICAL SERVICES

CASCADE DAILY WORK REPORT

ADDRESS: 19404 WOODINVILLE SNOHOMISH ROAD NE
CITY, STATE, ZIP: WOODINVILLE, WA 98072
PHONE NUMBER: 425 485.8908
PROJECT NUMBER:

CLIENT: Galloway | PROJECT #: | DAY: MON. | DATE: 8-13-18
JOB LOCATION: 160TH ST E, Sumner | DIG ALERT #: 18345255 | JOB #: 103-18-1398

Well # Bore #	Depth Drilled	DESCRIPTION OF WORK Please explain reasons for Down Time, Standby Time, and Shop Time	HOURS Start	HOURS Stop	Total Hrs	Charge Hours
		am Shop	5:00	6:00	1	
		Travel	6:00	7:30	1.5	
BKF	1	H&S Meeting, Set up	7:30	8:00	.5	.5
L673	14	Drilling, Sampling, Setting 14' 2"	8:00	9:00	1	
BKF	1	Decon, Clean up, Set 8" Box, Moving & Setting up	9:00	10:00	1	
L674	14	Drilling, Sampling, Setting 14' 2"	10:00	11:00	1	
BKF	1	Clean up, Decon, Moving & Setting up	11:00	11:30	.5	.5
L675	14	Drilling, Sampling, Setting, 14' 2"	11:30	12:30	1	
		Lunch	12:30	1:00		
BKF	1	Decon, Set 8" box, clean up, Moving & Setting up	1:00	2:00	1	
L676	14	Drilling, Sampling, Setting 14' 2"	2:00	3:00	1	
		Decon, Clean up, Pumping one well, Setting 2-8" boxes	3:00	4:30	1.5	
		Travel ~~to Shop~~	4:30	5:00	.5	
	1	PM Shop Time Janey	5:00	5:30	.5	
Total Ft.	56	**TOTAL CHARGEABLE RIG HOURS**				

RIG ENGINE HOURS: START | STOP | TOTAL

EQUIPMENT

DRILL RIG #	D203783	COMPRESSOR/JACKHAMMER	
SUPPORT TRUCK #	2112628	SNOW FENCE RENTAL	
SUPPORT TRUCK #		CONTINUOUS SAMPLER	
TRAILER #	203	CONTINUOUS SAMPLER FOOTAGE	
BOBCAT		# OF CORE CUTS	
AUTO HAMMER		# OF BULLDOG CUTS	
GROUT MIXER		# OF SERVICE RUNS	
GROUT PUMP		# OF SAW CUTS	
PERISTALTIC PUMP		PORTABLE RESTROOM	
FORKLIFT/HOPPER		EXHAUST DUCTING	

CASING

TYPE SLOT	2"		
20' SCREEN			
10' SCREEN	4		
5' SCREEN			
20' BLANK			
10' BLANK			
5' BLANK	4		
5' PP SCREEN			
10' PP SCREEN			
SLIP CAP			
THREADED CAPS	4		
LOCKING CAPS	4		
DRIVE SHOE			
CENTRALIZERS			
LOCKS			

MATERIALS

ITEM	QTY	ITEM	QTY
SAND	24	WELL COVER 8"	4
READYMIX	112	WELL COVER 12"	
QUICKSET		MONUMENT CASING	
PORTLAND		BOLLARDS	
ASPHALT		SOIL DRUMS	4
BENTONITE GROUT		DEVELOPMENT DRUMS	
BENTONITE CHIPS	3	DECON DRUMS	
BENTONITE POWDER		HOLE COVER PLATES	
BENTONITE PELLETS		PLASTIC SHEETING	1
BENTONITE GRANULAR		TRAFFIC CONTROL	
SAMPLER TUBES		CORE BOXES	
SHELBY TUBES		PLYWOOD	
PROBE POINTS		SOIL SAMPLES	4
GW PROBE POINTS		WATER SAMPLES	
EXP POINTS		MACRO LINERS	
SAMPLER SHOE		AUGER PLUGS	
		DRILL OUT BITS	

LABOR

NAME	SIGNATURE	SHOP		TOTAL HRS
Janey C.		1½	10½	12
Wesley K.		1	10½	11½

CREW WITH PER DIEM | CHARGEABLE EXTRA LABOR HRS

UTILITIES FOUND OR HIT

REMARKS

Client Signature X

Operator Signature

CASCADE
DRILLING | TECHNICAL SERVICES

CASCADE DAILY WORK REPORT

ADDRESS: 19404 WOODINVILLE SNOHOMISH ROAD NE
CITY, STATE, ZIP: WOODINVILLE, WA 98072
PHONE NUMBER: 425 485.8908
PROJECT NUMBER:

CLIENT: Galloway | PROJECT #: | DAY: Tue | DATE: 8-14-18
JOB LOCATION: 160TH ST. Sumner | DIG ALERT #: 18345255 | JOB #: 103-18-1398

Well # Bore #	Depth Drilled	DESCRIPTION OF WORK Please explain reasons for Down Time, Standby Time, and Shop Time	HOURS Start	HOURS Stop	Total Hrs	Charge Hours
		Travel	700	730	.5	
		H&S Meeting, Setting up	730	830	1	
BKF 1077	14	Drilling, Sampling, Setting, 14', 2"	830	930	1	
		Clean up, Decon, clean up, Moving, Set up	930	1000	.5	
BKF 1078	14	Drilling, Sampling, Setting 14', 2"	1000	1100	1	
		Developing, Decon, clean up, Setting, 2-8" Boxes	1100	100	2	
		lunch	100	130		
		Travel to Shop	130	330	2	
	1	PM Shop Time	330	500	1.5	
Total Ft.	28	TOTAL CHARGEABLE RIG HOURS				

RIG ENGINE HOURS: START | STOP | TOTAL

EQUIPMENT

DRILL RIG#	D204781	COMPRESSOR/JACKHAMMER	
SUPPORT TRUCK #	2112628	SNOW FENCE RENTAL	
SUPPORT TRUCK #		CONTINUOUS SAMPLER	
TRAILER #	2083	CONTINUOUS SAMPLER FOOTAGE	
BOBCAT		# OF CORE CUTS	
AUTO HAMMER		# OF BULLDOG CUTS	
GROUT MIXER		# OF SERVICE RUNS	
GROUT PUMP		# OF SAW CUTS	
PERISTALTIC PUMP		PORTABLE RESTROOM	
FORKLIFT/HOPPER		EXHAUST DUCTING	

CASING

TYPE SLOT	2"	
20' SCREEN		
10' SCREEN	2	
5' SCREEN		
20' BLANK		
10' BLANK		
5' BLANK	2	
5' PP SCREEN		
10' PP SCREEN		
SLIP CAP		
THREADED CAPS	2	
LOCKING CAPS	2	
DRIVE SHOE		
CENTRALIZERS		
LOCKS		

MATERIALS

ITEM	QTY	ITEM	QTY
SAND	13	WELL COVER 8"	2
READYMIX	10	WELL COVER 12"	
QUICKSET		MONUMENT CASING	
PORTLAND		BOLLARDS	
ASPHALT		SOIL DRUMS	2
BENTONITE GROUT		DEVELOPMENT DRUMS	2
BENTONITE CHIPS	2	DECON DRUMS	1
BENTONITE POWDER		HOLE COVER PLATES	
BENTONITE PELLETS		PLASTIC SHEETING	
BENTONITE GRANULAR		TRAFFIC CONTROL	
SAMPLER TUBES		CORE BOXES	
SHELBY TUBES		PLYWOOD	
PROBE POINTS		SOIL SAMPLES	2
GW PROBE POINTS		WATER SAMPLES	
EXP POINTS		MACRO LINERS	
SAMPLER SHOE		AUGER PLUGS	
		DRILL OUT BITS	

LABOR

NAME	SIGNATURE	SHOP		TOTAL HRS
James G.		1.5	8	9.5
Lindley K.		1.5	8	9.5

CREW WITH PER DIEM | CHARGEABLE EXTRA LABOR HRS

UTILITIES FOUND OR HIT

REMARKS

Client Signature X _____ Operator Signature _____

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

Consulting Firm: Galloway

City: Sumner County: Pierce

Unique Ecology Well ID Tag No.: BKF-673

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: _____

Driller/Trainee License No: 3131

If trainee, licensed driller's Signature and License No.: _____

Tax Parcel No: 520198006

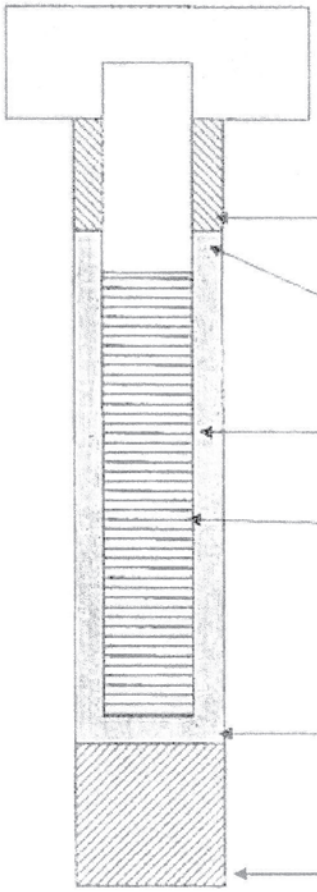
Cased or Uncased Diameter: 8"

Static Level: 6'

Work/Decommission Start Date: 8-13-18

Work/Decommission End Date: 8-13-18

Construction/Design — Well Data 103-18-1398 — Formation Description



Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent.	
Material	Chips	
Gravel Pack	11'	FT
Material	7/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description:

0 - 3' FT: Sand & gravel, rocky

3' - 10' FT: Dark Sandy Silt to Silty Sand

10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

City: Sumner County: Pierce

Consulting Firm: Galloway

Unique Ecology Well ID Tag No.: BKF-674

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E of WWM / EWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: _____

Driller/Trainee License No.: 3131

If trainee, licensed driller's Signature and License No.: _____

Tax Parcel No: 520198006

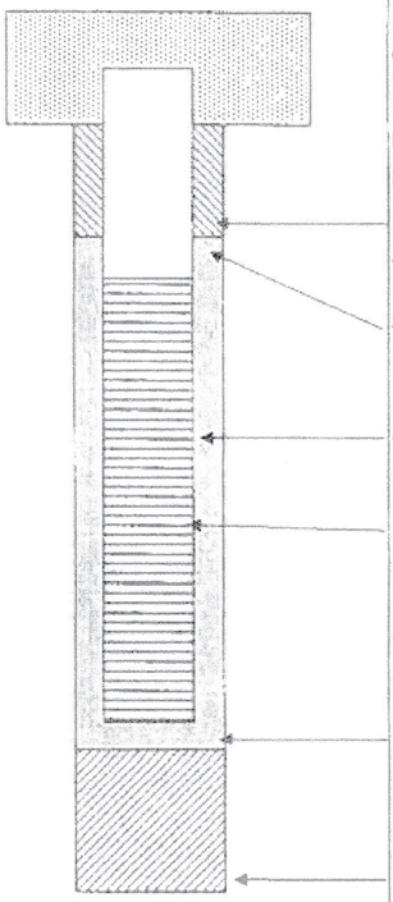
Cased or Uncased Diameter: 8"

Static Level: 6'

Work/Decommission Start Date: 8-13-18

Work/Decommission End Date: 8-13-18

Construction/Design



Well Data 103-18-1398

Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent	
Material	Chips	
Gravel Pack	11'	FT
Material	7/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description

0 - 3' FT: Sand & gravel, rocks

0 - 3' - 10' FT: Dark Sandy Silt to Silty Sand

0 - 10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev v2 -1)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

City: Sumner County: Pierce

Consulting Firm: Galloway

Unique Ecology Well ID Tag No.: BKF - 675

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E [WM] or WWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: _____

Driller/Trainee License No: 3131

If trainee, licensed driller's Signature and License No: _____

Tax Parcel No: 520198006

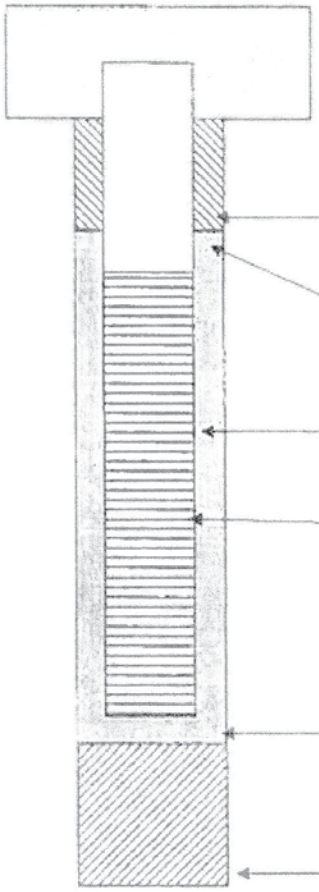
Cased or Uncased Diameter: 8"

Static Level: 6'

Work/Decommission Start Date: 8-13-18

Work/Decommission End Date: 8-13-18

Construction/Design — **Well Data** 103-18-1398 — **Formation Description**



Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent.	
Material	Chips	
Gravel Pack	11'	FT
Material	#12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description:

0 - 3' FT: Sand & gravel, rocks

0 - 3' - 10' FT: Dark Sandy Silt to Silty Sand

0 - 10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. v.2 - 1)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

City: Sumner County: Pierce

Consulting Firm: Galloway

Unique Ecology Well ID Tag No.: BKF-676

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E of WWM / EWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: _____

Driller/Trainee License No: 3131

If trainee, licensed driller's Signature and License No.: _____

Tax Parcel No: 520198006

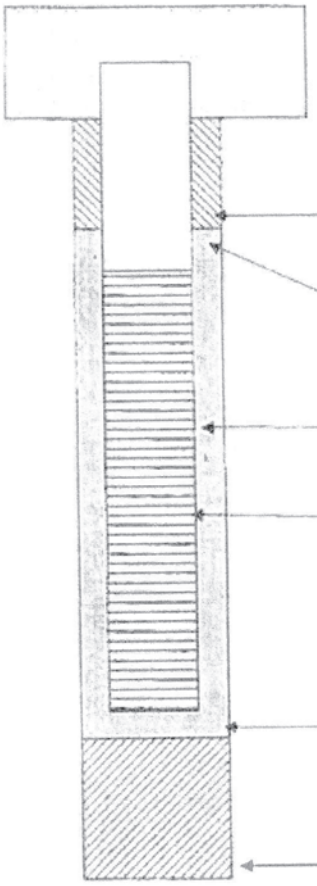
Cased or Uncased Diameter: 8"

Static Level: 6'

Work/Decommission Start Date: 8-13-18

Work/Decommission End Date: 8-13-18

Construction/Design — Well Data 103-18-1398 — Formation Description



Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent.	
Material	Chips	
Gravel Pack	11'	FT
Material	7/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description:

0 - 3' FT: Sand & gravel, rocks

3' - 10' FT: Dark Sandy Silt to Silty Sand

10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

City: Sumner County: Pierce

Consulting Firm: Galloway

Unique Ecology Well ID Tag No.: BKF - 677

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E [EWM] or WWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: [signature]

Driller/Trainee License No: 3131

If trainee, licensed driller's Signature and License No.: _____

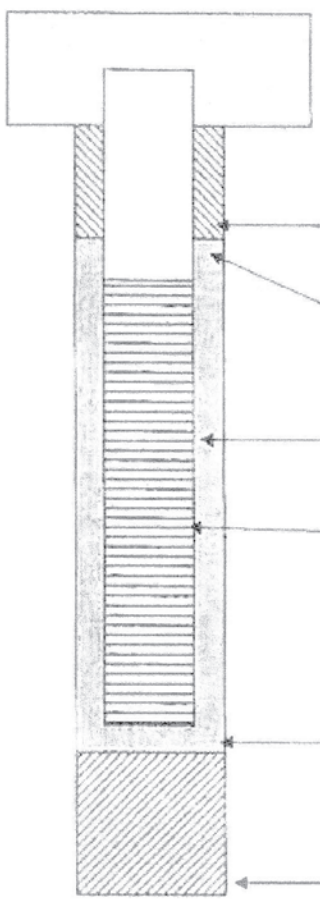
Tax Parcel No: 520198006

Cased or Uncased Diameter: 8" Static Level: 6'

Work/Decommission Start Date: 8-14-18

Work/Decommission End Date: 8-14-18

Construction/Design — Well Data 103-18-1398 — Formation Description



Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent.	
Material	Chips	
Gravel Pack	11'	FT
Material	7/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description:

0 - 3' FT: Sand & gravel, rocks

0 - 3' - 10' FT: Dark Sandy Silt to Silty Sand

0 - 10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____ Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE16329

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: Sumner National Auto Parts Store

Site Address: 16008 60th St E

City: Sumner County: Pierce

Consulting Firm: Galloway

Unique Ecology Well ID Tag No.: BKF-678

Location: 1/4 SW 1/4 SE Sec 19 TWN 20N R 5E EWM or WWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): James Goble

Driller/Trainee Signature: _____

Driller/Trainee License No.: 3131

If trainee, licensed driller's Signature and License No.: _____

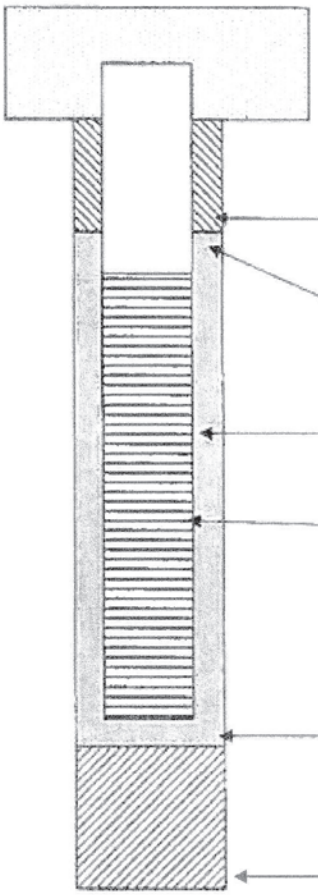
Tax Parcel No: 520198006

Cased or Uncased Diameter: 8" Static Level: 6'

Work/Decommission Start Date: 8-14-18

Work/Decommission End Date: 8-14-18

Construction/Design — Well Data 103-18-1398 — Formation Description



Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	2" x 4'	
Material	PVC	
Backfill	1'	FT
Type	Med	
Seal	Bent.	
Material	Chips	
Gravel Pack	11'	FT
Material	#12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	14'	FT
Backfill	x	
Material	x	
Total Hole Depth	14'	FT

Formation Description:

0 - 3' FT: Sand & gravel, rocks

3' - 10' FT: Dark Sandy Silt to Silty Sand

10' - 14' FT: fine to med Dark Brown Sand

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

WELL TEST SITES

SITE ADDRESS:

16008 60TH ST. E.
SUMNER, WA 98390

	NAD 83/11 USFT		NAVD 88 ELEV	
T#	NORTHING	EASTING	CAP	COVER
1	686,143.1	1,214,021.9	76.2	76.5
2	686,191.5	1,213,894.3	76.1	76.5
3	686,195.4	1,214,019.7	76.6	77.2
4	686,194.3	1,214,058.9	76.4	76.9
5	686,176.1	1,214,098.2	76.5	77.1
6	686,111.7	1,214,093.9	76.4	77.1
7	686,041.6	1,214,049.9	76.2	76.9

EXHIBIT PREPARED FOR: GALLOWAY ENVIRONMENTAL
BM USED: WSDOT BM27410-7, ELEV. 93.89' (NAVD88)
DRAWN BY: JB
FILE NAME: GALLD-02A

CRONES LLC
LAND SURVEYORS
23806 190TH AVE. S.E. KENT, WA 98042 (425) 432-5930

JAMES D. CRONES
STATE OF WASHINGTON
29537
REGISTERED
PROFESSIONAL LAND SURVEYOR

DATE: 10-2-18

WELL TEST SITES

SCALE: 1" = 50'
EXHIBIT PREPARED FOR: GALLOWAY ENVIRONMENTAL
DRAWN BY: JB
FILE NAME: GALLD-02A

SHEET 2 OF 2

APPENDIX B

LABORATORY ANALYTICAL REPORT

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 21, 2018

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1808-145

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 13, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

Case Narrative

Samples were collected on August 13, 2018 and received by the laboratory on August 13, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	61	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*120*	*50-150*				
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	62	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Gasoline Range Organics	**ND**	27	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	66	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	55	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*110*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0814S2					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	50	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Acetone	0.095	0.0057	EPA 8260C	8-14-18	8-14-18	Y
Iodomethane	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Butanone	0.018	0.0057	EPA 8260C	8-14-18	8-14-18	Y
Bromochloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0023	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0057	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*101*	*68-139*
Toluene-d8	*100*	*79-128*
4-Bromofluorobenzene	*94*	*71-132*

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Acetone	0.014	0.0066	EPA 8260C	8-14-18	8-14-18	Y
Iodomethane	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
2-Butanone	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0027	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0066	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	8-14-18	8-14-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*97*	*68-139*
Toluene-d8	*100*	*79-128*
4-Bromofluorobenzene	*99*	*71-132*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Acetone	0.010	0.0059	EPA 8260C	8-14-18	8-14-18	Y
Iodomethane	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
2-Butanone	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0024	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	8-14-18	8-14-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*103*	*68-139*
Toluene-d8	*102*	*79-128*
4-Bromofluorobenzene	*97*	*71-132*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Acetone	0.0088	0.0056	EPA 8260C	8-14-18	8-14-18	Y
Iodomethane	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Butanone	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0023	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	8-14-18	8-14-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*101*	*68-139*
Toluene-d8	*102*	*79-128*
4-Bromofluorobenzene	*101*	*71-132*

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0814S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Acetone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Iodomethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Butanone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0814S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0020	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*68-139*				
Toluene-d8	*104*	*79-128*				
4-Bromofluorobenzene	*98*	*71-132*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0814S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0427**	**0.0414**	0.0500	0.0500	85	83	53-141	3	17	
Benzene	**0.0450**	**0.0442**	0.0500	0.0500	90	88	70-130	2	15	
Trichloroethene	**0.0463**	**0.0439**	0.0500	0.0500	93	88	74-122	5	16	
Toluene	**0.0472**	**0.0453**	0.0500	0.0500	94	91	76-130	4	15	
Chlorobenzene	**0.0452**	**0.0442**	0.0500	0.0500	90	88	75-120	2	14	
Surrogate:										
Dibromofluoromethane					*96*	*100*	*68-139*			
Toluene-d8					*103*	*104*	*79-128*			
4-Bromofluorobenzene					*102*	*103*	*71-132*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**0.010**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*40 - 117*				
Pyrene-d10	*79*	*38 - 119*				
Terphenyl-d14	*77*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Naphthalene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0083	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*83*	*40 - 117*				
Pyrene-d10	*83*	*38 - 119*				
Terphenyl-d14	*83*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Naphthalene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0089	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 117*				
Pyrene-d10	*82*	*38 - 119*				
Terphenyl-d14	*81*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Naphthalene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**0.015**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**0.013**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**0.011**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0073	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 117*				
Pyrene-d10	*86*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0814S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*92*	*40 - 117*				
Pyrene-d10	*86*	*38 - 119*				
Terphenyl-d14	*87*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0814S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0706**	**0.0674**	0.0833	0.0833	85	81	54 - 114	5	15	
Acenaphthylene	**0.0667**	**0.0654**	0.0833	0.0833	80	79	59 - 119	2	15	
Acenaphthene	**0.0680**	**0.0692**	0.0833	0.0833	82	83	58 - 117	2	15	
Fluorene	**0.0744**	**0.0727**	0.0833	0.0833	89	87	61 - 122	2	15	
Phenanthrene	**0.0711**	**0.0696**	0.0833	0.0833	85	84	58 - 121	2	15	
Anthracene	**0.0727**	**0.0717**	0.0833	0.0833	87	86	66 - 126	1	15	
Fluoranthene	**0.0745**	**0.0736**	0.0833	0.0833	89	88	62 - 126	1	15	
Pyrene	**0.0731**	**0.0715**	0.0833	0.0833	88	86	61 - 126	2	15	
Benzo[a]anthracene	**0.0814**	**0.0797**	0.0833	0.0833	98	96	64 - 132	2	15	
Chrysene	**0.0722**	**0.0734**	0.0833	0.0833	87	88	64 - 127	2	15	
Benzo[b]fluoranthene	**0.0769**	**0.0714**	0.0833	0.0833	92	86	57 - 128	7	15	
Benzo(j,k)fluoranthene	**0.0713**	**0.0742**	0.0833	0.0833	86	89	62 - 130	4	15	
Benzo[a]pyrene	**0.0740**	**0.0730**	0.0833	0.0833	89	88	62 - 125	1	15	
Indeno(1,2,3-c,d)pyrene	**0.0748**	**0.0774**	0.0833	0.0833	90	93	55 - 130	3	15	
Dibenz[a,h]anthracene	**0.0762**	**0.0745**	0.0833	0.0833	91	89	58 - 129	2	15	
Benzo[g,h,i]perylene	**0.0719**	**0.0707**	0.0833	0.0833	86	85	57 - 129	2	15	
Surrogate:										
2-Fluorobiphenyl					*77*	*84*	*40 - 117*			
Pyrene-d10					*85*	*83*	*38 - 119*			
Terphenyl-d14					*84*	*82*	*47 - 135*			

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Aroclor 1016	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*39-130*				
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Aroclor 1016	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.062	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*71*	*39-130*				
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Aroclor 1016	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*39-130*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Aroclor 1016	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.055	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*70*	*39-130*				

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0814S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1221	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1232	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1242	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1248	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1254	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1260	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*39-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-146-03										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.377**	**0.368**	0.500	0.500	ND	**75**	**74**	45-118	2	15	
Surrogate:											
DCB						*75*	*78*	*39-130*			

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Arsenic	**ND**	12	EPA 6010D	8-15-18	8-15-18	
Barium	**49**	3.0	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.61	EPA 6010D	8-15-18	8-15-18	
Chromium	**18**	0.61	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	6.1	EPA 6010D	8-15-18	8-15-18	
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Arsenic	**ND**	12	EPA 6010D	8-15-18	8-15-18	
Barium	**21**	3.1	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.62	EPA 6010D	8-15-18	8-15-18	
Chromium	**15**	0.62	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	6.2	EPA 6010D	8-15-18	8-15-18	
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Arsenic	**ND**	13	EPA 6010D	8-15-18	8-15-18	
Barium	**19**	3.3	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.66	EPA 6010D	8-15-18	8-15-18	
Chromium	**16**	0.66	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	6.6	EPA 6010D	8-15-18	8-15-18	
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Arsenic	**ND**	11	EPA 6010D	8-15-18	8-15-18	
Barium	**19**	2.7	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.55	EPA 6010D	8-15-18	8-15-18	
Chromium	**13**	0.55	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	5.5	EPA 6010D	8-15-18	8-15-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815SM1					
Arsenic	**ND**	10	EPA 6010D	8-15-18	8-15-18	
Barium	**ND**	2.5	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.50	EPA 6010D	8-15-18	8-15-18	
Chromium	**ND**	0.50	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	5.0	EPA 6010D	8-15-18	8-15-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-145-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Barium	**40.4**	**41.3**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**15.1**	**15.5**	NA	NA		NA		NA	3	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-145-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**91.1**	**92.4**	100	100	ND	**91**	**92**	75-125	1	20	
Barium	**147**	**140**	100	100	40.4	**107**	**100**	75-125	5	20	
Cadmium	**48.8**	**47.8**	50.0	50.0	ND	**98**	**96**	75-125	2	20	
Chromium	**113**	**107**	100	100	15.1	**98**	**92**	75-125	5	20	
Lead	**237**	**231**	250	250	ND	**95**	**92**	75-125	3	20	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2 @ 5**					
Laboratory ID:	08-145-01					
Hexavalent Chromium	**ND**	1.2	EPA 7196A mod.	8-14-18	8-14-18	
Client ID:	**MW-3 @ 4.5**					
Laboratory ID:	08-145-02					
Hexavalent Chromium	**ND**	1.2	EPA 7196A mod.	8-14-18	8-14-18	
Client ID:	**MW-4 @ 4.5**					
Laboratory ID:	08-145-03					
Hexavalent Chromium	**ND**	1.3	EPA 7196A mod.	8-14-18	8-14-18	
Client ID:	**MW-7 @ 4.8**					
Laboratory ID:	08-145-04					
Hexavalent Chromium	**ND**	1.1	EPA 7196A mod.	8-14-18	8-14-18	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0814S1					
Hexavalent Chromium	**ND**	1.0	EPA 7196A mod.	8-14-18	8-14-18	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-145-02								
	ORIG	DUP							
Hexavalent Chromium	**ND**	**ND**	NA	NA	NA	NA	NA	20	
DUPLICATE									
Laboratory ID:	08-145-02 MS								
	ORIG	DUP							
Hexavalent Chromium	**5.03**	**5.03**	NA	NA	NA	NA	0	20	
SPIKE BLANK									
Laboratory ID:	SB0814S1								
	SB		SB		SB				
Hexavalent Chromium	**5.19**		5.00	NA	104	75-125	NA	NA	

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Date of Report: August 21, 2018
Samples Submitted: August 13, 2018
Laboratory Reference: 1808-145
Project: 37018

% MOISTURE

Date Analyzed: 8-14-18

Client ID	Lab ID	% Moisture
MW-2 @ 5	08-145-01	18
MW-3 @ 4.5	08-145-02	20
MW-4 @ 4.5	08-145-03	25
MW-7 @ 4.8	08-145-04	8

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 08-145

Company: Galloway Environmental Inc
Project Number: 37018
Project Name: National Auto
Project Manager: D. Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals As, Ba, Cd, Pb Cr (TRI & hex)	TCLP Metals	HEM (oil and grease) 1664A	Ethylene Glycol				% Moisture
1	MW-2@5	8/13/18	0830	S	5	X				X				X	X					X							X
2	MW-3@4.5	↓	1000	↓	↓	X				X				X	X					X							↓
3	MW-4@4.5	↓	1110	↓	↓	X				X				X	X					X							↓
4	MW-7@4.8	↓	1356	↓	↓	X				X				X	X					X							↓

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	8/13/18	1730
Received	[signature]	OSE	8/13/18	1730
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 21, 2018

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1808-150

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 14, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

Case Narrative

Samples were collected on August 14, 2018 and received by the laboratory on August 14, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	61	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Gasoline Range Organics	**ND**	27	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	66	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*116*	*50-150*				

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0814S2					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	8-14-18	8-14-18	
Diesel Range Organics	**ND**	50	NWTPH-HCID	8-14-18	8-14-18	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Chloromethane	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Vinyl Chloride	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Bromomethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Chloroethane	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Acetone	0.013	0.0062	EPA 8260C	8-15-18	8-15-18	
Iodomethane	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Carbon Disulfide	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Methylene Chloride	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Vinyl Acetate	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
2-Butanone	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Bromochloromethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Chloroform	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Benzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Trichloroethene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Dibromomethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Bromodichloromethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Toluene	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Tetrachloroethene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
2-Hexanone	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Dibromochloromethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Chlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Ethylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
m,p-Xylene	0.012	0.0025	EPA 8260C	8-15-18	8-15-18	
o-Xylene	0.0034	0.0012	EPA 8260C	8-15-18	8-15-18	
Styrene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Bromoform	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Isopropylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Bromobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
n-Propylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
2-Chlorotoluene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
4-Chlorotoluene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
tert-Butylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
sec-Butylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
n-Butylbenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	8-15-18	8-15-18	
Naphthalene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	8-15-18	8-15-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*94*	*68-139*
Toluene-d8	*101*	*79-128*
4-Bromofluorobenzene	*96*	*71-132*

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Chloromethane	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Bromomethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Chloroethane	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Acetone	0.0084	0.0055	EPA 8260C	8-15-18	8-15-18	
Iodomethane	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Methylene Chloride	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
2-Butanone	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Bromochloromethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Chloroform	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Benzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Trichloroethene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Dibromomethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Toluene	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
2-Hexanone	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Chlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Ethylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
m,p-Xylene	ND	0.0022	EPA 8260C	8-15-18	8-15-18	
o-Xylene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Styrene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Bromoform	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Bromobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	8-15-18	8-15-18	
Naphthalene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	8-15-18	8-15-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*94*	*68-139*
Toluene-d8	*104*	*79-128*
4-Bromofluorobenzene	*99*	*71-132*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0815S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Chloromethane	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Bromomethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Chloroethane	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Acetone	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Iodomethane	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
2-Butanone	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Chloroform	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Benzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Toluene	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0815S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
2-Hexanone	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Ethylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
m,p-Xylene	ND	0.0020	EPA 8260C	8-15-18	8-15-18	
o-Xylene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Styrene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Bromoform	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-15-18	8-15-18	
Naphthalene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-15-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*68-139*				
Toluene-d8	*106*	*79-128*				
4-Bromofluorobenzene	*103*	*71-132*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0815S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0379**	**0.0377**	0.0500	0.0500	76	75	53-141	1	17	
Benzene	**0.0405**	**0.0401**	0.0500	0.0500	81	80	70-130	1	15	
Trichloroethene	**0.0436**	**0.0422**	0.0500	0.0500	87	84	74-122	3	16	
Toluene	**0.0443**	**0.0427**	0.0500	0.0500	89	85	76-130	4	15	
Chlorobenzene	**0.0421**	**0.0416**	0.0500	0.0500	84	83	75-120	1	14	
Surrogate:										
Dibromofluoromethane					*96*	*95*	*68-139*			
Toluene-d8					*102*	*101*	*79-128*			
4-Bromofluorobenzene					*104*	*100*	*71-132*			

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*40 - 117*				
Pyrene-d10	*77*	*38 - 119*				
Terphenyl-d14	*76*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Naphthalene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0088	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*40 - 117*				
Pyrene-d10	*71*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0814S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*92*	*40 - 117*				
Pyrene-d10	*86*	*38 - 119*				
Terphenyl-d14	*87*	*47 - 135*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0814S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0706**	**0.0674**	0.0833	0.0833	85	81	54 - 114	5	15	
Acenaphthylene	**0.0667**	**0.0654**	0.0833	0.0833	80	79	59 - 119	2	15	
Acenaphthene	**0.0680**	**0.0692**	0.0833	0.0833	82	83	58 - 117	2	15	
Fluorene	**0.0744**	**0.0727**	0.0833	0.0833	89	87	61 - 122	2	15	
Phenanthrene	**0.0711**	**0.0696**	0.0833	0.0833	85	84	58 - 121	2	15	
Anthracene	**0.0727**	**0.0717**	0.0833	0.0833	87	86	66 - 126	1	15	
Fluoranthene	**0.0745**	**0.0736**	0.0833	0.0833	89	88	62 - 126	1	15	
Pyrene	**0.0731**	**0.0715**	0.0833	0.0833	88	86	61 - 126	2	15	
Benzo[a]anthracene	**0.0814**	**0.0797**	0.0833	0.0833	98	96	64 - 132	2	15	
Chrysene	**0.0722**	**0.0734**	0.0833	0.0833	87	88	64 - 127	2	15	
Benzo[b]fluoranthene	**0.0769**	**0.0714**	0.0833	0.0833	92	86	57 - 128	7	15	
Benzo(j,k)fluoranthene	**0.0713**	**0.0742**	0.0833	0.0833	86	89	62 - 130	4	15	
Benzo[a]pyrene	**0.0740**	**0.0730**	0.0833	0.0833	89	88	62 - 125	1	15	
Indeno(1,2,3-c,d)pyrene	**0.0748**	**0.0774**	0.0833	0.0833	90	93	55 - 130	3	15	
Dibenz[a,h]anthracene	**0.0762**	**0.0745**	0.0833	0.0833	91	89	58 - 129	2	15	
Benzo[g,h,i]perylene	**0.0719**	**0.0707**	0.0833	0.0833	86	85	57 - 129	2	15	
Surrogate:										
2-Fluorobiphenyl					*77*	*84*	*40 - 117*			
Pyrene-d10					*85*	*83*	*38 - 119*			
Terphenyl-d14					*84*	*82*	*47 - 135*			

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Aroclor 1016	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*77*	*39-130*				
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Aroclor 1016	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1221	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1232	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1242	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1248	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1254	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Aroclor 1260	**ND**	0.066	EPA 8082A	8-14-18	8-15-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*62*	*39-130*				

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0814S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1221	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1232	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1242	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1248	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1254	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Aroclor 1260	**ND**	0.050	EPA 8082A	8-14-18	8-14-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*39-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-146-03										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.377**	**0.368**	0.500	0.500	ND	**75**	**74**	45-118	2	15	
Surrogate:											
DCB						*75*	*78*	*39-130*			

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Arsenic	**ND**	12	EPA 6010D	8-15-18	8-15-18	
Barium	**38**	3.1	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.61	EPA 6010D	8-15-18	8-15-18	
Chromium	**20**	0.61	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	6.1	EPA 6010D	8-15-18	8-15-18	
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Arsenic	**ND**	13	EPA 6010D	8-15-18	8-15-18	
Barium	**30**	3.3	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.66	EPA 6010D	8-15-18	8-15-18	
Chromium	**16**	0.66	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	6.6	EPA 6010D	8-15-18	8-15-18	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

TOTAL METALS
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0815SM1					
Arsenic	**ND**	10	EPA 6010D	8-15-18	8-15-18	
Barium	**ND**	2.5	EPA 6010D	8-15-18	8-15-18	
Cadmium	**ND**	0.50	EPA 6010D	8-15-18	8-15-18	
Chromium	**ND**	0.50	EPA 6010D	8-15-18	8-15-18	
Lead	**ND**	5.0	EPA 6010D	8-15-18	8-15-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-145-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Barium	**40.4**	**41.3**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**15.1**	**15.5**	NA	NA		NA		NA	3	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-145-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**91.1**	**92.4**	100	100	ND	**91**	**92**	75-125	1	20	
Barium	**147**	**140**	100	100	40.4	**107**	**100**	75-125	5	20	
Cadmium	**48.8**	**47.8**	50.0	50.0	ND	**98**	**96**	75-125	2	20	
Chromium	**113**	**107**	100	100	15.1	**98**	**92**	75-125	5	20	
Lead	**237**	**231**	250	250	ND	**95**	**92**	75-125	3	20	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 4.5**					
Laboratory ID:	08-150-01					
Hexavalent Chromium	**ND**	1.2	EPA 7196A mod.	8-16-18	8-16-18	
Client ID:	**MW-6 @ 4.7**					
Laboratory ID:	08-150-02					
Hexavalent Chromium	**ND**	1.3	EPA 7196A mod.	8-16-18	8-16-18	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816S1					
Hexavalent Chromium	**ND**	1.0	EPA 7196A mod.	8-16-18	8-16-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-137-03										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-137-03										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**4.96**	**5.29**	5.00	5.00	ND	99	106	75-125	6	20	
SPIKE BLANK											
Laboratory ID:	SB0816S1										
	SB		SB			SB					
Hexavalent Chromium	**4.90**		5.00		NA	98		75-125	NA	NA	

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Date of Report: August 21, 2018
Samples Submitted: August 14, 2018
Laboratory Reference: 1808-150
Project: 37018

% MOISTURE

Date Analyzed: 8-14-18

Client ID	Lab ID	% Moisture
MW-5 @ 4.5	08-150-01	18
MW-6 @ 4.7	08-150-02	25

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National Auto
Project Manager: D. Galloway
Sampled by: D. Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-150

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals As, Ba, Cd, Pb, Cr(Tri & Hex)	TCLP Metals	HEM (oil and grease) 1664A	Ethylene Glycol				% Moisture
1	MW-5@ 4.5	8/14/18	0826	S	5	X				X				X	X					X							X
2	MW-6@ 4.7	8/14/18	0935	S	5	X				X				X	X					X							X

	Signature	Company	Date	Time
Relinquished		GEL	8/14/18	1400
Received		OSE	8/14/18	1400
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 11, 2018

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1808-385

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

Case Narrative

Samples were collected on August 31, 2018 and received by the laboratory on August 31, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Both associated method blanks each had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0904W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	9-4-18	9-4-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	9-4-18	9-4-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*91*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*108*	*75-127*
Toluene-d8	*104*	*80-127*
4-Bromofluorobenzene	*81*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	0.62	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*113*	*75-127*
Toluene-d8	*104*	*80-127*
4-Bromofluorobenzene	*86*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*115*	*75-127*
Toluene-d8	*108*	*80-127*
4-Bromofluorobenzene	*86*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*117*	*75-127*
Toluene-d8	*108*	*80-127*
4-Bromofluorobenzene	*88*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*113*	*75-127*
Toluene-d8	*107*	*80-127*
4-Bromofluorobenzene	*85*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*118*	*75-127*
Toluene-d8	*107*	*80-127*
4-Bromofluorobenzene	*86*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*117*	*75-127*
Toluene-d8	*107*	*80-127*
4-Bromofluorobenzene	*86*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0907W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloromethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroethane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Acetone	ND	7.4	EPA 8260C	9-7-18	9-7-18	
Iodomethane	ND	1.3	EPA 8260C	9-7-18	9-7-18	
Carbon Disulfide	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Vinyl Acetate	ND	1.0	EPA 8260C	9-7-18	9-7-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Butanone	ND	5.0	EPA 8260C	9-7-18	9-7-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chloroform	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Benzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Trichloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Dibromomethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Toluene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0907W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Hexanone	ND	2.0	EPA 8260C	9-7-18	9-7-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-7-18	9-7-18	
o-Xylene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Styrene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromoform	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Isopropylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Bromobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Propylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
n-Butylbenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
Naphthalene	ND	1.0	EPA 8260C	9-7-18	9-7-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-7-18	9-7-18	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*114*	*75-127*
Toluene-d8	*107*	*80-127*
4-Bromofluorobenzene	*86*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0907W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.65**	**9.57**	10.0	10.0	97	96	62-129	1	15	
Benzene	**9.43**	**9.44**	10.0	10.0	94	94	77-127	0	15	
Trichloroethene	**9.42**	**9.05**	10.0	10.0	94	91	70-120	4	15	
Toluene	**9.65**	**9.48**	10.0	10.0	97	95	82-123	2	15	
Chlorobenzene	**9.37**	**8.94**	10.0	10.0	94	89	79-120	5	15	
Surrogate:										
Dibromofluoromethane					*106*	*111*	*75-127*			
Toluene-d8					*104*	*105*	*80-127*			
4-Bromofluorobenzene					*83*	*84*	*78-125*			

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Naphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*106*	*21 - 110*				
Pyrene-d10	*85*	*19 - 111*				
Terphenyl-d14	*114*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Naphthalene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.26	EPA 8270D/SIM	9-4-18	9-4-18	U1
1-Methylnaphthalene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	9-4-18	9-4-18	U1
Fluorene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.095	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*90*	*21 - 110*				
Pyrene-d10	*88*	*19 - 111*				
Terphenyl-d14	*100*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Naphthalene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.096	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.0096	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*21 - 110*				
Pyrene-d10	*81*	*19 - 111*				
Terphenyl-d14	*87*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Naphthalene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.097	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.0097	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*21 - 110*				
Pyrene-d10	*95*	*19 - 111*				
Terphenyl-d14	*95*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*49*	*21 - 110*				
Pyrene-d10	*64*	*19 - 111*				
Terphenyl-d14	*58*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-7-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*41*	*21 - 110*				
Pyrene-d10	*57*	*19 - 111*				
Terphenyl-d14	*53*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Naphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*21 - 110*				
Pyrene-d10	*87*	*19 - 111*				
Terphenyl-d14	*85*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0904W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*115*	*21 - 110*				Q
Pyrene-d10	*88*	*19 - 111*				
Terphenyl-d14	*117*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0906W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluorene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Pyrene	**ND**	0.10	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	9-6-18	9-6-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*148*	*21 - 110*				Q
Pyrene-d10	*80*	*19 - 111*				
Terphenyl-d14	*98*	*32 - 137*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0904W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.343**	**0.271**	0.500	0.500	69	54	28 - 109	23	38	
Acenaphthylene	**0.384**	**0.320**	0.500	0.500	77	64	37 - 111	18	26	
Acenaphthene	**0.375**	**0.304**	0.500	0.500	75	61	41 - 113	21	33	
Fluorene	**0.366**	**0.339**	0.500	0.500	73	68	47 - 114	8	23	
Phenanthrene	**0.363**	**0.339**	0.500	0.500	73	68	50 - 113	7	18	
Anthracene	**0.380**	**0.362**	0.500	0.500	76	72	50 - 117	5	18	
Fluoranthene	**0.396**	**0.381**	0.500	0.500	79	76	52 - 120	4	15	
Pyrene	**0.395**	**0.381**	0.500	0.500	79	76	51 - 128	4	31	
Benzo[a]anthracene	**0.428**	**0.413**	0.500	0.500	86	83	57 - 127	4	15	
Chrysene	**0.414**	**0.413**	0.500	0.500	83	83	51 - 120	0	15	
Benzo[b]fluoranthene	**0.412**	**0.402**	0.500	0.500	82	80	54 - 124	2	17	
Benzo(j,k)fluoranthene	**0.426**	**0.418**	0.500	0.500	85	84	50 - 127	2	18	
Benzo[a]pyrene	**0.414**	**0.398**	0.500	0.500	83	80	50 - 120	4	16	
Indeno(1,2,3-c,d)pyrene	**0.407**	**0.390**	0.500	0.500	81	78	46 - 132	4	20	
Dibenz[a,h]anthracene	**0.416**	**0.403**	0.500	0.500	83	81	49 - 129	3	18	
Benzo[g,h,i]perylene	**0.412**	**0.402**	0.500	0.500	82	80	45 - 130	2	19	
Surrogate:										
2-Fluorobiphenyl					*69*	*56*	*21 - 110*			
Pyrene-d10					*79*	*78*	*19 - 111*			
Terphenyl-d14					*79*	*77*	*32 - 137*			

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0906W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.249**	**0.308**	0.500	0.500	50	62	28 - 109	21	38	
Acenaphthylene	**0.289**	**0.354**	0.500	0.500	58	71	37 - 111	20	26	
Acenaphthene	**0.300**	**0.345**	0.500	0.500	60	69	41 - 113	14	33	
Fluorene	**0.302**	**0.366**	0.500	0.500	60	73	47 - 114	19	23	
Phenanthrene	**0.315**	**0.363**	0.500	0.500	63	73	50 - 113	14	18	
Anthracene	**0.320**	**0.371**	0.500	0.500	64	74	50 - 117	15	18	
Fluoranthene	**0.348**	**0.394**	0.500	0.500	70	79	52 - 120	12	15	
Pyrene	**0.370**	**0.394**	0.500	0.500	74	79	51 - 128	6	31	
Benzo[a]anthracene	**0.360**	**0.401**	0.500	0.500	72	80	57 - 127	11	15	
Chrysene	**0.357**	**0.398**	0.500	0.500	71	80	51 - 120	11	15	
Benzo[b]fluoranthene	**0.358**	**0.401**	0.500	0.500	72	80	54 - 124	11	17	
Benzo(j,k)fluoranthene	**0.357**	**0.399**	0.500	0.500	71	80	50 - 127	11	18	
Benzo[a]pyrene	**0.343**	**0.387**	0.500	0.500	69	77	50 - 120	12	16	
Indeno(1,2,3-c,d)pyrene	**0.330**	**0.368**	0.500	0.500	66	74	46 - 132	11	20	
Dibenz[a,h]anthracene	**0.345**	**0.391**	0.500	0.500	69	78	49 - 129	13	18	
Benzo[g,h,i]perylene	**0.342**	**0.389**	0.500	0.500	68	78	45 - 130	13	19	
Surrogate:										
2-Fluorobiphenyl					*59*	*63*	*21 - 110*			
Pyrene-d10					*71*	*80*	*19 - 111*			
Terphenyl-d14					*70*	*75*	*32 - 137*			

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*102*	*44-144*				
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*44-144*				
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*95*	*44-144*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*104*	*44-144*				
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*108*	*44-144*				
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*107*	*44-144*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Aroclor 1016	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.047	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*103*	*44-144*				

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0904W1					
Aroclor 1016	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1221	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1232	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1242	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1248	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1254	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Aroclor 1260	**ND**	0.050	EPA 8082A	9-4-18	9-4-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*99*	*44-144*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0904W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.433**	**0.470**	0.500	0.500	N/A	**87**	**94**	71-131	8	12	
Surrogate:											
DCB						*102*	*110*	*44-144*			

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Arsenic	**ND**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**39**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	8-31-18	9-6-18	
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Arsenic	**9.0**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**37**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	8-31-18	9-6-18	
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Arsenic	**ND**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**40**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	8-31-18	9-6-18	
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Arsenic	**5.9**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**32**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Arsenic	**5.4**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**43**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Arsenic	**ND**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**52**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Arsenic	**ND**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**ND**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	8-31-18	9-6-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

DISSOLVED METALS
EPA 200.8
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907F1					
Lead	**ND**	1.0	EPA 200.8	9-7-18	9-7-18	
Laboratory ID:	MB0831F1					
Arsenic	**ND**	3.0	EPA 200.8	8-31-18	9-6-18	
Barium	**ND**	25	EPA 200.8	8-31-18	9-6-18	
Cadmium	**ND**	4.0	EPA 200.8	8-31-18	9-6-18	
Chromium	**ND**	10	EPA 200.8	8-31-18	9-6-18	
Lead	**ND**	1.0	EPA 200.8	8-31-18	9-6-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-385-07										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Barium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-385-07										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**206**	**205**	200	200	ND	**103**	**102**	75-125	0	20	
Barium	**231**	**232**	200	200	ND	**115**	**116**	75-125	0	20	
Cadmium	**196**	**197**	200	200	ND	**98**	**98**	75-125	0	20	
Chromium	**188**	**193**	200	200	ND	**94**	**97**	75-125	3	20	
Lead	**189**	**194**	200	200	ND	**95**	**97**	75-125	2	20	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

TOTAL METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Arsenic	**ND**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**59**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Arsenic	**12**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**69**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Arsenic	**ND**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**63**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Arsenic	**6.4**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**34**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	

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Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

TOTAL METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Arsenic	**5.8**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**50**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Arsenic	**ND**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**57**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Arsenic	**ND**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**ND**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

TOTAL METALS
EPA 200.8
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907WM1					
Arsenic	**ND**	3.3	EPA 200.8	9-7-18	9-7-18	
Barium	**ND**	28	EPA 200.8	9-7-18	9-7-18	
Cadmium	**ND**	4.4	EPA 200.8	9-7-18	9-7-18	
Chromium	**ND**	11	EPA 200.8	9-7-18	9-7-18	
Lead	**ND**	1.1	EPA 200.8	9-7-18	9-7-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-385-07										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Barium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-385-07										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**206**	**205**	200	200	ND	**103**	**102**	75-125	0	20	
Barium	**231**	**232**	200	200	ND	**115**	**116**	75-125	0	20	
Cadmium	**196**	**197**	200	200	ND	**98**	**98**	75-125	0	20	
Chromium	**188**	**193**	200	200	ND	**94**	**97**	75-125	3	20	
Lead	**189**	**194**	200	200	ND	**95**	**97**	75-125	2	20	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	08-385-01					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-3**					
Laboratory ID:	08-385-02					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-4**					
Laboratory ID:	08-385-03					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-7**					
Laboratory ID:	08-385-04					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-5**					
Laboratory ID:	08-385-05					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-6**					
Laboratory ID:	08-385-06					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	
Client ID:	**MW-1**					
Laboratory ID:	08-385-07					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	

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Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-385
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0831W1					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	8-31-18	8-31-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-385-07										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-385-07										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**91.4**	**91.6**	100	100	ND	91	92	75-125	0	20	
SPIKE BLANK											
Laboratory ID:	SB0831W1										
	SB		SB			SB					
Hexavalent Chromium	**101**		100		NA	101		80-120	NA	NA	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National Auto
Project Manager: Dylan Galloway
Sampled by: Dylan Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 08-385

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Metals (dissolved) As, Ba, Cd, Pb, Cr (tri & hex)	Metals (total) As, Ba, Cd, Pb, Cr (tri & hex)			% Moisture
1	MW-2	8/31/18	0818	W	3	X				X				X	X								X	X			
2	MW-3	↓	0925	↓	↓	X				X				X	X								X	X			
3	MW-4		1025			X				X				X	X								X	X			
4	MW-7		1140			X				X				X	X								X	X			
5	MW-5		1250			X				X				X	X								X	X			
6	MW-6		1340			X				X				X	X								X	X			
7	MW-1		1410			X				X				X	X								X	X			

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	8/31/18	1547
Received	[signature]	OSE	8/31/18	1547
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Lab Filter

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

January 16, 2019

Sunset Chevrolet, Inc.
Mitchell Development
Attn: Ms. Christi Acuna
910 Traffic Avenue
Sumner, WA 98390

E-mailed to: CristiAcuna@SunsetChev.com

SUBJECT: GROUNDWATER MONITORING REPORT FOR THE NATIONAL AUTO PARTS PROPERTY AT 16008 60TH STREET EAST, SUMNER, WASHINGTON 98390; WA ECOLOGY SITE ID #1304, CLEANUP SITE #3653, VCP PROJECT #SW1547

Dear Ms. Acuna:

This letter report presents Galloway Environmental, Inc.'s (GEI's) findings from recent sampling of seven groundwater monitoring wells at the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington (hereafter referred to as "t*he Site*." The Washington State Department of Ecology (Ecology) Site Identification (ID) for the Site is #1304. Ecology's Cleanup Site ID for the Site is #3653. Ecology's Voluntary Cleanup Project ID for the Site is SW1547.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with the property listed as parcel numbers 0520198006 and 2006198700. Parcel 0520198006 is listed as "Phil's Speed Shop, LLC" which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse. Parcel 2006198700 is listed as "Sumner National Auto Parts, Inc" and does not have acreage listed.

This work was conducted as a continuance to an independent remedial action undertaken by GEI for Mr. Phil Mitchell with the primary goal to evaluate groundwater conditions upgradient and downgradient of the former source area of contamination to confirm the effectiveness of the recent Independent Remedial Action at the Site.

BACKGROUND

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop since the facility was constructed in 1979 until it was recently closed. The machine shop area occupied approximately 4,500 sf and the retail sales and storage area occupied approximately 3,000 sf.

Reportedly, an unknown amount of spent parts cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the building near the structure's exterior door. The Washington State Department of Ecology (Ecology) responded to a citizen complaint regarding the spill and determined that the Site was impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "Work Plan."

Between October 2017 and January 2018, a remedial excavation was conducted at the Site in general accordance with the Work Plan. The primary objective of remediating the Site was to ensure the protection of human health and the environment.

The remedial excavation generally included the removal of 262.92 tons of impacted soils. The excavated soil was transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the Waste Disposal Authorization (WDA) number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of concern (COCs) from the final limits of excavation (confirmation samples).

Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been satisfactorily removed from the Site.

Between August 13, 2018 and August 14, 2018, GEI oversaw the installation of six groundwater monitoring wells at the Site. One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015. The six additional wells (MW-2 through MW-7) were installed in general accordance with the Work Plan and GEI's proposal number 2709.03, dated September 7, 2017. The installation included one well in the western perimeter of the Site (MW-2), two north of the remedial excavation area (MW-3 and MW-4), two east of the remedial excavation area (MW-5 and MW-6), and one in the upgradient position (MW-7). The locations are depicted in Figure 2 of Attachment 1 of this report.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated photoionization detector [PID]) readings. GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. At each sample point, Cascade advanced an 18-inch long split spoon sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied glass containers.

In accordance with the Work Plan and Ecology's Opinion Letter dated July 12, 2017, GEI submitted the soil samples to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) to test for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID), VOCs, PAHs, PCBs, and metals (arsenic, barium, cadmium, chromium, and lead).

Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels.

On August 31, 2018, GEI collected groundwater samples from each well for laboratory analysis. The samples were submitted the to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium. Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations of analytes at levels below their respective action levels with exception to dissolved and total arsenic. Dissolved arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 9.0 micrograms per liter (μg/L), 5.4 μg/L, and 5.9 μg/L, respectively. Total arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 12.0 μg/L, 5.8 μg/L, and 6.4 μg/L, respectively and slightly exceed the Model Toxics Control Act (MTCA) Method A Cleanup Level of 5.0 μg/L.

GROUNDWATER MONITORING

On December 20, 2018, GEI collected groundwater samples from each of the seven on-site groundwater monitoring wells. Prior to sample collection, GEI gauged and purged each well to determine the depths to groundwater, confirm stabilized groundwater conditions, and attain representative groundwater samples. The purging and sampling methods included the use of a low-flow peristaltic pump and dedicated tubing which directed the samples into new laboratory supplied glass containers. During the purging process, water quality parameters were measured using a multiparameter water quality meter (model YSI 556 MPS) fitted with a flow-through cell to measure pH, temperature, conductivity, and dissolved oxygen (DO). The meter was calibrated prior to use using a 3-point pH calibration process (pH valued at 4.02, 7.02, and 10.04) and a 3-point conductivity process (conductivity valued at 84 micrograms per centimeter [μg/cm], 1,413 μg/cm, and 12,880 μg/cm).

The pH measured at the conclusion of the purging process for all wells ranged from 5.58 (MW-5) to 6.27 (MW-2). The conductivity measured at the conclusion of the purging process for all wells ranged from 1.126

milliSiemens per centimeter (mS/cm) (MW-6) to 0.274 mS/cm. The DO measured at the conclusion of the purging process for all wells ranged from 0.60 milligrams per liter (mg/L) (MW-2) to 1.63 mg/L (MW-5). Turbidity was observed to be clear in all wells at the conclusion of the purging process. GEI purged a minimum of three well volumes from each well prior to sample collection.

Chemical Analysis of Groundwater Samples

GEI submitted the samples to OnSite to test for petroleum hydrocarbon identification using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID) with follow-up to detected analyte(s) and dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the US EPA 200.8/7470A Method. Petroleum constituents (benzene, toluene, ethylbenzene, and xylenes), PAHs, PCBs, and hexavalent chromium were eliminated from the analyte list during this sampling event since they were not detected at appreciable levels during the groundwater monitoring event in August 2018.

Sample Handling, Storage, and Shipment

The samples were packaged properly according to the current DOT requirements. Ice was added to ensure that the samples were kept at approximately 4 degrees Celsius (˚C). The samples were kept chilled between the time of the sampling and the time of the analytical processing.

The samples were hand-delivered to the analytical laboratory on their collection date under proper chain-of-custody protocols on the same day as collection. A field logbook documented the field activities, observations, and other relevant information regarding the sampling.

Equipment Decontamination

The samples were collected at each sample location using procedures designed to minimize the risk of cross contamination of the samples. All sampling equipment that could come into direct contact with sample media was decontaminated before starting work and between each sampling location. The following procedure was used for cleaning all sampling equipment:

- Remove gross contamination by brushing/wiping and rinsing with potable water.
- Wash and scrub with laboratory grade detergent (i.e., Aquinox®).
- Rinse with distilled water.
- Air dried.

Groundwater Sample Analytical Results

Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels. These are further discussed below and presented in Table 1 (Attachment 2). The laboratory analytical report is attached as Appendix B.

Petroleum Hydrocarbons

Laboratory analysis resulted in the detection of petroleum hydrocarbons as diesel in the groundwater collected from MW-4 at a concentration of 0.27 mg/L, below the MTCA Method A Cleanup Level of 0.5 mg/L. Laboratory analysis did not result in a detection of any other petroleum compound at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs) in any of the other groundwater samples analyzed.

Metals

Dissolved arsenic was detected in the groundwater sample collected from MW-7 at a concentration of 3.2 μg/L below the MTCA Method A Cleanup Level of 5.0 μg/L. Laboratory analysis did not result in a detection of any other metals analytes at concentrations equal to or exceeding their respective laboratory PQLs in any of the groundwater samples analyzed

CONCLUSIONS AND RECOMMENDATIONS

Based on laboratory analyses, the groundwater in all groundwater monitoring wells sampled during this monitoring event were confirmed to have either non-detectable concentrations of contaminants of concern or detected concentrations at levels below their respective MTCA Method A Cleanup Action Levels.

GEI recommends continued monitoring of the groundwater in all seven groundwater monitoring wells.

GEI further recommends continued elimination of future analyses of PAHs, PCBs, total metals, and hexavalent chromium.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact me at the addresses listed at the top of this letter.

Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA
President

ATTACHMENT 1

FIGURES

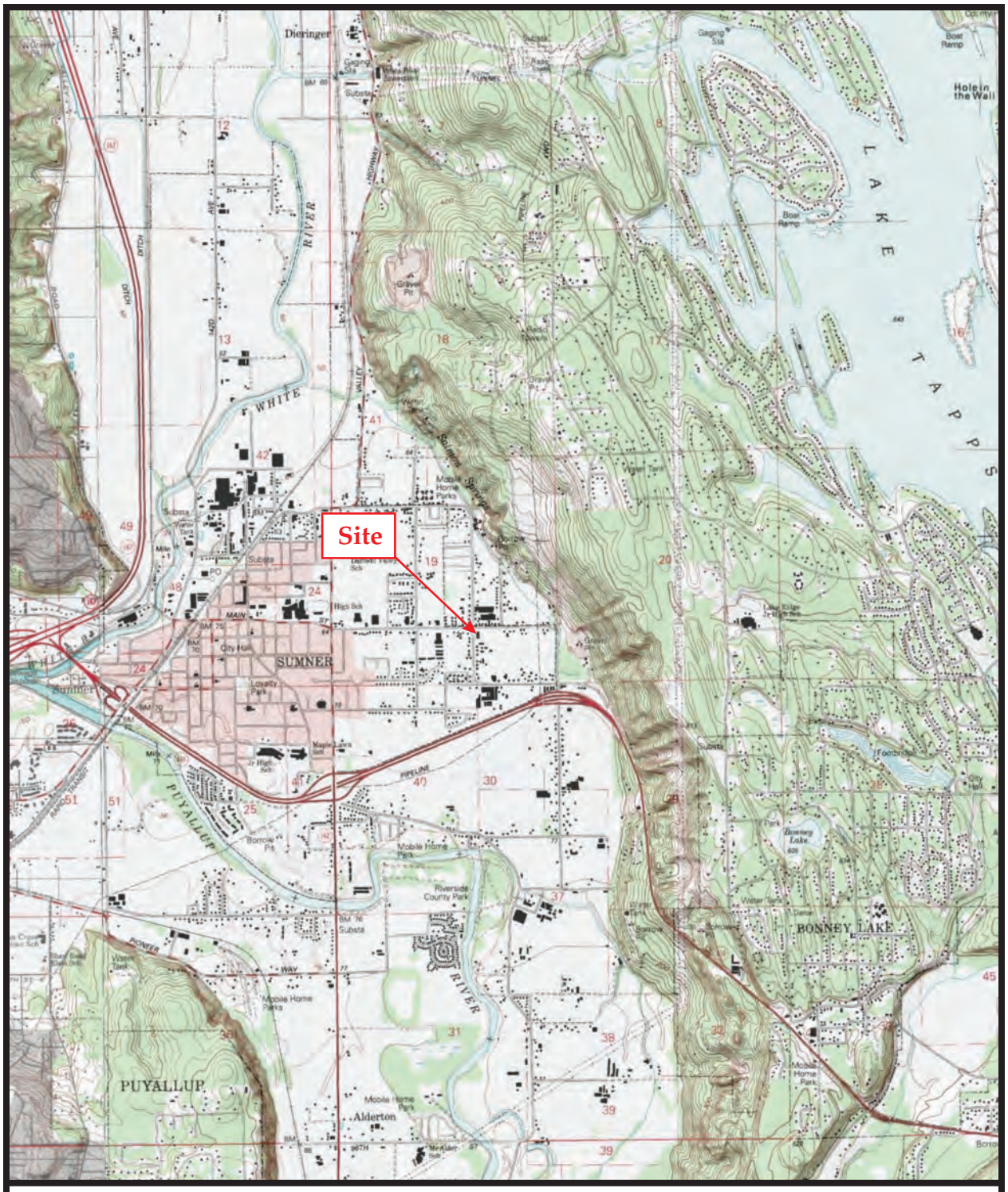


FIGURE 1 — SITE LOCATION MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: MyTopo.com, GEI Project 37018

N

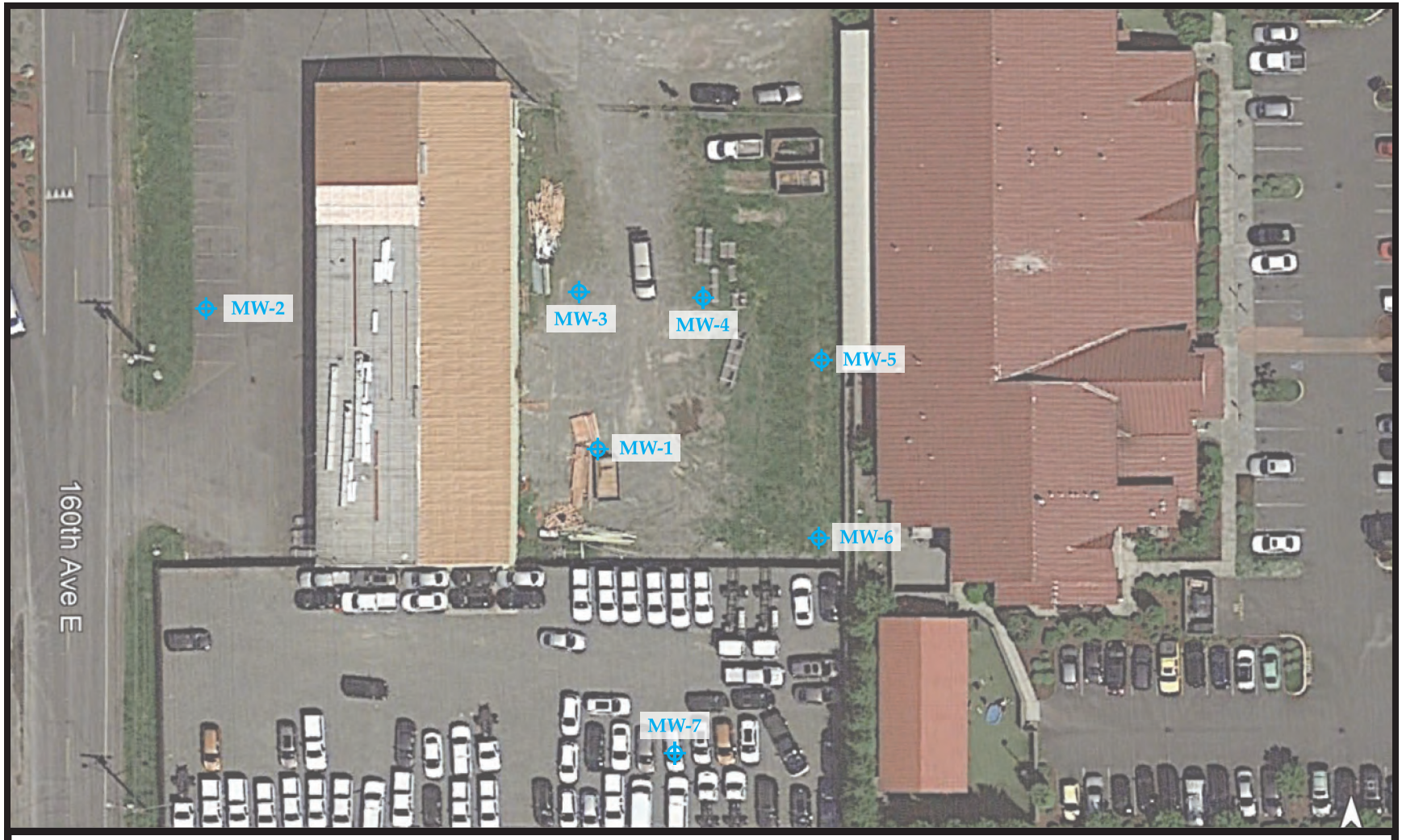
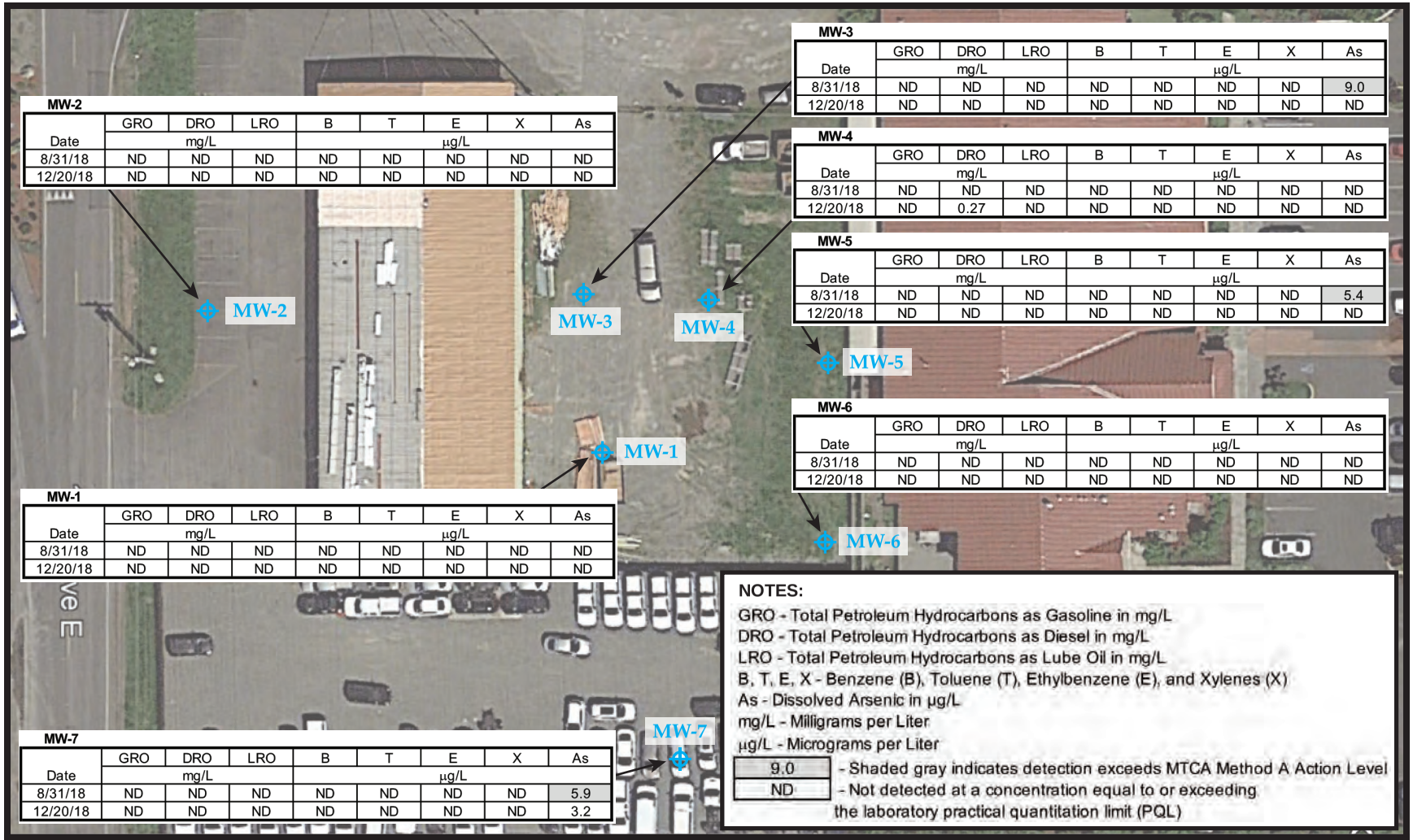


FIGURE 2—GROUNDWATER MONITORING WELL MAP
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N



MW-2

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND

MW-3

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	9.0
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND

MW-4

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	0.27	ND	ND	ND	ND	ND	ND

MW-5

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.4
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND

MW-6

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND

MW-1

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND

MW-7

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.9
12/20/18	ND	ND	ND	ND	ND	ND	ND	3.2

NOTES:

GRO - Total Petroleum Hydrocarbons as Gasoline in mg/L
DRO - Total Petroleum Hydrocarbons as Diesel in mg/L
LRO - Total Petroleum Hydrocarbons as Lube Oil in mg/L
B, T, E, X - Benzene (B), Toluene (T), Ethylbenzene (E), and Xylenes (X)
As - Dissolved Arsenic in µg/L
mg/L - Milligrams per Liter
µg/L - Micrograms per Liter

9.0	- Shaded gray indicates detection exceeds MTCA Method A Action Level
ND	- Not detected at a concentration equal to or exceeding the laboratory practical quantitation limit (PQL)

FIGURE 3—GROUNDWATER MONITORING WELL SELECT ANALYTICAL RESULTS

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N

ATTACHMENT 2

ANALYTICAL TABLES

Table 1
Select Laboratory
Analytical Results
for Groundwater Samples
National Auto Parts
GEI Project #37018

Sample Number	Date of Sample	Analyte																						
		Total Petroleum Hydrocarbons (mg/L)			Fuel Constituents (µg/L)				Polycyclic Aromatic Hydrocarbons			Polychlorinated Biphenyl (µg/L)	Dissolved Metals (µg/L)						Hexavalent Chromium (µg/L)	Total Metals (µg/L)				
		Gasoline	Diesel	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury		Arsenic	Barium	Cadmium	Chromium	Lead
MW-1	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	ND <25	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	ND <28	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	ND <0.26	ND <0.41	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-2	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	39	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	59	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-3	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.095	ND <0.095	ND <0.095	ND <0.047	**9.0**	37	ND <4.0	ND <10	ND <1.0	--	ND <10	**12.0**	69	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-4	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.096	ND <0.096	ND <0.096	ND <0.047	ND <3.0	40	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	63	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	0.27	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-5	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	**5.4**	43	ND <4.0	ND <10	ND <1.0	--	ND <10	**5.8**	50	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-6	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	52	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	57	ND <4.4	ND <11	ND <1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MW-7	8/31/2018	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.097	ND <0.097	ND <0.097	ND <0.047	**5.9**	32	ND <4.0	ND <10	ND <1.0	--	ND <10	**6.4**	34	ND <4.0	ND <10	ND <1.0
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	3.2	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--
MTCA Method Action Level		**0.8/1.0[a]**	**0.5**	**0.5**	**5.0**	**1,000**	**700**	**1,000**	**NVE**	**NVE**	**480[b]**	**0.1**	**5.0/10[c]**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**	**48**	**5.0**	**3,200[b]**	**5.0**	**50**	**15**

Notes:

mg/L	Milligrams per liter
µg/L	Micrograms per liter
a	Model Toxics Control Act (MTCA) Method A Action Level is 0.8 mg/L with benzene present and 1.0 mg/L without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Action Level is 5.0 µg/L; Ecology's Maximum Contaminant Level is 10 mg/L
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
9.0	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established
--	Not analyzed

APPENDIX A

FIELD FORMS

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: Nat'l Auto Well No. MW-1 Date & Time Started 12/20/18 0940

Project Location: 1608 6th St E Well Location & diameter SW portion of Remedial Excavation

Client Mitchell Development Site Manager D Galloway Logged By D Galloway

Measuring Point North Initial depth to water 3.21 Depth to well bottom 8.25

Water column in well 5.04 Gallons per foot 0.077 Gallons in well 0.39 (x3=1.17)

Purging method peristaltic Pump Volume purged 2.0 Decontamination Alconox & DI H2O

Sampler D Galloway Number & type of containers 2-½L Ambers, 3-40mL VOAs, 2-½L Polys

Sample preservation method: HCl & ice HNO3 Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
0945	10.21	6.41	0.188	slt turbid	4.87	slt tan	0.1 gal total
0951	10.15	5.67	0.190	clr	2.45	clr	0.25 gal total
0958	10.12	5.79	0.190	clr	1.48	clr	1.0 gal total
1004	10.10	5.80	0.191	clr	1.38	clr	1.25 gal total
1010	10.10	5.82	0.191	clr	1.34	clr	2.0 gal total
							1014 collect water sample
							field filtered the sample portions for metals

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: Natural Auto Well No. MW-2 Date & Time Started 12/20/18 1150

Project Location: 16008 60th St E Well Location & diameter W of Bldg 2"

Client Mitchell Development Site Manager D Galloway Logged By D Galloway

Measuring Point N Initial depth to water 3.28 Depth to well bottom 13.80

Water column in well 10.52 Gallons per foot 0.16 Gallons in well 1.68 (x3=5.04)

Purging method Peristaltic Pump Volume purged 5.5 Decontamination Alconox & DI H2O

Sampler D Galloway Number & type of containers 2-1/2L Ambers 2-1/2L Polys 3-40mL VOAs

Sample preservation method: HNO3 HCL ICE Other (describe)

Time	Temperature (°C)	pH	mS/cm Conductivity (µS)	Turbidity	mg/L Dissolved Oxygen	Water Color	DESCRIPTION (Volume purged between measurements)
1200	11.91°C	6.24	0.257	clr	4.01	clr	0.25 gal total
1207	12.16	6.30	0.267	clr	0.98	clr	1.0 gal total
1214	12.29	6.29	0.271	clr	0.60	clr	2.0 gal total
1221	12.27	6.28	0.273	clr	0.63	clr	3.0 gal total
1228	12.28	6.28	0.274	clr	0.63	clr	4.0 gal total
1235	12.28	6.27	0.274	clr	0.61	clr	5.0 gal total
1240	12.29	6.27	0.274	clr	0.60	clr	5.5 gal total
							1244 Collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-3 Date & Time Started 12/20/18 1250

Project Location: 16028 60th STE Well Location & diameter E of bldg 2"

Client Mitchell Development Site Manager DGalloway Logged By DGalloway

Measuring Point N Initial depth to water 3.68 Depth to well bottom 13.63

Water column in well 9.95 Gallons per foot 0.16 Gallons in well 1.59 (x3= 4.77)

Purging method Peristaltic Pump Volume purged 5 gal Decontamination Alconox & DI Water

Sampler DGalloway Number & type of containers 2-1/2L Ambers, 2-1/2L Polys, 3-40mL VOAs

Sample preservation method: HNO3 HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1258	11.10	6.06	0.198	clr	3.79	clr	0.25 gal total
1305	11.39	6.04	0.203	clr	0.89	clr	1.0 gal total
1312	11.55	6.06	0.205	clr	0.87	clr	2.0 gal total
1319	11.65	6.07	0.205	clr	0.86	clr	3.0 gal total
1326	11.66	6.08	0.204	clr	0.90	clr	4.0 gal total
1334	11.66	6.08	0.204	clr	0.87	clr	5.0 gal total
							1337 Collect Water Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-4 Date & Time Started 12/20/18 1348

Project Location: 16008 60th St E Well Location & diameter E-Central to Bldg 2"

Client Mitchell Development Site Manager D. Galloway Logged By D Galloway

Measuring Point N Initial depth to water 3.38 Depth to well bottom 13.78

Water column in well 10.4 Gallons per foot 0.16 Gallons in well 1.66 (x3 = 4.98)

Purging method Peristaltic Pump Volume purged 5.0 Decontamination Aquanox & DI water

Sampler D Galloway Number & type of containers 2-1/2L Ambers, 2-1/2L Polys, 3-40mL VOAs

Sample preservation method: HCl, HNO3, Ice Other (describe)

Time	Temperature (°C)	pH	mS/cm Conductivity (µS)	Turbidity	mg/L Dissolved Oxygen	Water Color	DESCRIPTION (Volume purged between measurements)
1350	9.58	5.94	0.166	clr	3.20	clr	0.25 gal total
1357	9.89	5.91	0.168	clr	1.49	clr	1.0 gal total
1404	10.21	5.95	0.171	clr	0.91	clr	2.0 gal total
1411	10.43	5.98	0.174	clr	0.71	clr	3.0 gal total
1417	10.54	6.00	0.176	clr	0.61	clr	4.0 gal total
1425	10.54	6.01	0.177	clr	0.62	clr	5.0 gal total
							1430 collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-5 Date & Time Started 12/20/18 1540

Project Location: 16008 60th St E Well Location & diameter E Prop Perimeter / center 2"

Client Mitchell Development Site Manager D Galloway Logged By D Galloway

Measuring Point N Initial depth to water 3.34 Depth to well bottom 14.29

Water column in well 10.95 Gallons per foot 0.16 Gallons in well 1.75 (x3=5.25)

Purging method Peristaltic Pump Volume purged 5.5 gal Decontamination Alconox & DI H2O

Sampler D Galloway Number & type of containers 2-1/2L Ambers, 2-1/2L Polys, 3-40 ml VOAs

Sample preservation method: HCL HNO3 ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1545	9.21	5.91	0.143	clr	3.02	clr	0.25 gal total
1548	9.35	5.91	0.144	clr	2.69	clr	1.0 gal total
1554	9.53	5.89	0.144	clr	2.50	clr	1.5 gal total
1601	9.76	5.87	0.145	clr	2.33	clr	2.5 gal total
1608	9.97	5.86	0.146	clr	2.0	clr	3.5 gal total
1615	9.98	5.85	0.147	clr	1.78	clr	4.5 gal total
1622	9.99	5.58	0.148	clr	1.63	clr	5.5 gal total
							1628 collect water Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature _____ **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: Natural Auto Well No. MW-6 Date & Time Started 12/20/18 1440

Project Location: 16008 60th Ave E Well Location & diameter E of Bldg

Client Mitchell Development Site Manager D Galloway Logged By D Galloway

Measuring Point N Initial depth to water 3.30 Depth to well bottom 14.10

Water column in well 10.8 Gallons per foot 0.16 Gallons in well 1.73 (x 3 = 5.19)

Purging method Peristaltic Pump Volume purged 6.0 Decontamination Alconox & DI H2O

Sampler D Galloway Number & type of containers 2-1/2L Ambers 2 1/2L Polys 3-40mL VOAs

Sample preservation method: HCL Ice HNO3 Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1445	8.95	5.91	0.121	clr	3.64	clr	0.4 gal total
1450	9.19	5.89	0.121	clr	2.00	clr	1.0 gal total
1456	9.45	5.87	0.120	clr	1.36	clr	2.0 gal total
1503	9.68	5.88	0.121	clr	0.94	clr	3.0 gal total
1510	9.74	5.90	0.123	clr	0.81	clr	4.0 gal total
1517	9.75	5.94	0.125	clr	0.80	clr	5.0 gal total
1524	9.75	5.93	0.126	clr	0.80	clr	6.0 gal total
							1530 collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 12/20/18

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St, Suite B1,617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-7 Date & Time Started 12/20/18 1030

Project Location: 16008 60th St E Well Location & diameter SE portion of Property 2"

Client Mitchell Development Site Manager D Galloway Logged By D Galloway

Measuring Point N portion Initial depth to water 3.11 Depth to well bottom 13.85

Water column in well 10.74 Gallons per foot 0.16 Gallons in well 1.72 (x3=5.15)

Purging method Peristaltic Pump Volume purged 5.5 gallons Decontamination Alconox & DI H_2O

Sampler D Galloway Number & type of containers 2-½L Ambers 2-½L Polys 3 40mL VOAs

Sample preservation method: HCl & ice / HNO_3 Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1040	12.45	6.45	0.281	Slight	2.98	Slight tan	0.1 gal total
1044	12.32	6.32	0.273	Slight	2.53	Slight tan	0.5 gal total
1052	12.36	6.25	0.258	clr	1.63	clr	1.5 gal total
1100	12.39	6.24	0.252	clr	1.32	clr	2.5 gal total
1108	12.47	6.22	0.231	clr	0.92	clr	3.5 gal total
1116	12.49	6.21	0.220	clr	0.78	clr	4.5 gal total
1124	12.50	6.21	0.219	clr	0.76	clr	5.5 gal total
							1127 collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature **Date** 12/20/18

APPENDIX B

LABORATORY ANALYTICAL REPORT

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 3, 2019

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1812-218

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on December 21, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

Case Narrative

Samples were collected on December 20, 2018 and received by the laboratory on December 21, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	12-218-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	12-218-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	12-218-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	12-218-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**Detected**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-5**					
Laboratory ID:	12-218-05					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	12-218-06					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	12-218-07					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1226W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	12-26-18	12-26-18	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	12-218-04					
Diesel Range Organics	**0.27**	0.25	NWTPH-Dx	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1226W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	12-26-18	12-26-18	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	12-26-18	12-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	12-230-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*72*	*73*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	12-218-01					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	
Client ID:	**MW-2**					
Laboratory ID:	12-218-02					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	
Client ID:	**MW-3**					
Laboratory ID:	12-218-03					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	
Client ID:	**MW-4**					
Laboratory ID:	12-218-04					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	12-218-05					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	
Client ID:	**MW-6**					
Laboratory ID:	12-218-06					
Arsenic	**ND**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	
Client ID:	**MW-7**					
Laboratory ID:	12-218-07					
Arsenic	**3.2**	3.0	EPA 200.8		12-26-18	
Cadmium	**ND**	4.0	EPA 200.8		12-26-18	
Chromium	**ND**	10	EPA 200.8		12-26-18	
Lead	**ND**	1.0	EPA 200.8		12-26-18	
Mercury	**ND**	0.50	EPA 7470A		1-2-19	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 3, 2019
Samples Submitted: December 21, 2018
Laboratory Reference: 1812-218
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1221F1					
Arsenic	**ND**	3.0	EPA 200.8	12-21-18	12-26-18	
Cadmium	**ND**	4.0	EPA 200.8	12-21-18	12-26-18	
Chromium	**ND**	10	EPA 200.8	12-21-18	12-26-18	
Lead	**ND**	1.0	EPA 200.8	12-21-18	12-26-18	
Laboratory ID:	MB1221F1					
Mercury	**ND**	0.50	EPA 7470A	12-21-18	1-2-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	12-230-02										
	ORIG	DUP									
Arsenic	**10.8**	**11.6**	NA	NA		NA		NA	7	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	12-230-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	12-230-02										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**219**	**218**	200	200	10.8	**104**	**103**	75-125	1	20	
Cadmium	**197**	**197**	200	200	ND	**98**	**99**	75-125	0	20	
Chromium	**184**	**186**	200	200	ND	**92**	**93**	75-125	1	20	
Lead	**199**	**197**	200	200	ND	**99**	**98**	75-125	1	20	
Laboratory ID:	12-230-01										
Mercury	**11.5**	**11.7**	12.5	12.5	ND	**92**	**93**	75-125	2	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental Inc
Project Number: 37018
Project Name: Natural Auto
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 12-218

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	~~Total~~ MTCA Metals ~~Total~~ Dissolved	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	MW-1	12/20/18	1014	W	7	X														X							
2	MW-2	↓	1244	↓	↓	X														X							
3	MW-3		1337			X														X							
4	MW-4		1430			X			(X)											X							
5	MW-5		1628			X														X							
6	MW-6		1530			X														X							
7	MW-7		1127			X														X							

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	12/21/18	0956
Received	[signature]	OSE	12/21/18	0956
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Metals analysis – Samples are field filtered

(X) Added 12/28/18 ~~BG~~ STA

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

April 28, 2019

Sunset Chevrolet, Inc.
Mitchell Development
Attn: Ms. Cristi Acuna
910 Traffic Avenue
Sumner, WA 98390

E-mailed to: CristiAcuna@SunsetChev.com

SUBJECT: GROUNDWATER MONITORING REPORT FOR THE NATIONAL AUTO PARTS PROPERTY AT 16008 60TH STREET EAST, SUMNER, WASHINGTON 98390; WA ECOLOGY SITE ID #1304, CLEANUP SITE #3653, VCP PROJECT #SW1547

Dear Ms. Acuna:

This letter report presents Galloway Environmental, Inc.'s (GEI's) findings from recent sampling of seven groundwater monitoring wells at the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington (hereafter referred to as "t*he Site*." The Washington State Department of Ecology (Ecology) Site Identification (ID) for the Site is #1304. Ecology's Cleanup Site ID for the Site is #3653. Ecology's Voluntary Cleanup Project ID for the Site is SW1547.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with the property listed as parcel numbers 0520198006 and 2006198700. Parcel 0520198006 is listed as "Phil's Speed Shop, LLC" which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse. Parcel 2006198700 is listed as "Sumner National Auto Parts, Inc" and does not have acreage listed.

This work was conducted as a continuance to an independent remedial action undertaken by GEI for Mr. Phil Mitchell with the primary goal to evaluate groundwater conditions upgradient and downgradient of the former source area of contamination to confirm the effectiveness of the recent Independent Remedial Action at the Site.

BACKGROUND

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop since the facility was constructed in 1979 until it was recently closed. The machine shop area occupied approximately 4,500 sf and the retail sales and storage area occupied approximately 3,000 sf.

Reportedly, an unknown amount of spent parts cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the building near the structure's exterior door. The Washington State Department of Ecology (Ecology) responded to a citizen complaint regarding the spill and determined that the Site was impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "Work Plan."

Between October 2017 and January 2018, a remedial excavation was conducted at the Site in general accordance with the Work Plan. The primary objective of remediating the Site was to ensure the protection of human health and the environment.

The remedial excavation generally included the removal of 262.92 tons of impacted soils. The excavated soil was transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the Waste Disposal Authorization (WDA) number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of concern (COCs) from the final limits of excavation (confirmation samples).

Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been satisfactorily removed from the Site.

Between August 13, 2018 and August 14, 2018, GEI oversaw the installation of six groundwater monitoring wells at the Site. One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015. The six additional wells (MW-2 through MW-7) were installed in general accordance with the Work Plan and GEI's proposal number 2709.03, dated September 7, 2017. The installation included one well in the western perimeter of the Site (MW-2), two north of the remedial excavation area (MW-3 and MW-4), two east of the remedial excavation area (MW-5 and MW-6), and one in the upgradient position (MW-7). The locations are depicted in Figure 2 of Attachment 1 of this report.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated photoionization detector [PID]) readings. GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. At each sample point, Cascade advanced an 18-inch long split spoon sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied glass containers.

In accordance with the Work Plan and Ecology's Opinion Letter dated July 12, 2017, GEI submitted the soil samples to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) to test for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID), VOCs, PAHs, PCBs, and metals (arsenic, barium, cadmium, chromium, and lead).

Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels.

<u>Quarterly Groundwater Monitoring Event 1 – August 31, 2018</u>

On August 31, 2018, GEI collected conducted the first quarterly groundwater monitoring for the site. The samples were submitted the to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium.

Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations of analytes at levels below their respective action levels with exception to dissolved and total arsenic. Dissolved arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 9.0 micrograms per liter (μg/L), 5.4 μg/L, and 5.9 μg/L, respectively. Total arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 12.0 μg/L, 5.8 μg/L, and 6.4 μg/L, respectively and slightly exceed the Model Toxics Control Act (MTCA) Method A Cleanup Level of 5.0 μg/L.

<u>Quarterly Groundwater Monitoring Event 2 – December 20, 2018</u>

On December 20, 2018, GEI conducted a second quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbon identification using the NWTPH-HCID Method with follow-up to detected analyte(s) and dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the United States Environmental Protection Agency (USEPA) 200.8/7470A Method. Petroleum constituents (benzene, toluene, ethylbenzene, and xylenes), PAHs, PCBs, and hexavalent chromium were eliminated from the analyte list during this sampling event since they were not detected at appreciable levels during the groundwater monitoring event in August 2018.

Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations of analytes at levels below their respective laboratory practical quantitation limits (PQLs) with exception to total petroleum hydrocarbons as diesel (TPH-Diesel) and dissolved arsenic. TPH-Diesel was detected in the groundwater sample collected from MW-4 at a concentration of 0.27 milligrams per liter (mg/L),

below its MTCA Method A Cleanup Level of 0.5 mg/L. Dissolved arsenic was detected in the groundwater sample collected from MW-7 at a concentration of 3.2 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L.

GROUNDWATER MONITORING QUARTER 3 – MARCH 26, 2019

On March 26, 2019, GEI collected groundwater samples from each of the seven on-site groundwater monitoring wells. Prior to sample collection, GEI gauged and purged each well to determine the depths to groundwater, confirm stabilized groundwater conditions, and attain representative groundwater samples. The purging and sampling methods included the use of a low-flow peristaltic pump and dedicated tubing which directed the samples into new laboratory supplied glass containers. During the purging process, water quality parameters were measured using a multiparameter water quality meter (model YSI 556 MPS) fitted with a flow-through cell to measure pH, temperature, conductivity, and dissolved oxygen (DO). The meter was calibrated prior to use using a 3-point pH calibration process (pH valued at 4.02, 7.02, and 10.04) and a 3-point conductivity process (conductivity valued at 84 micrograms per centimeter [μg/cm], 1,413 μg/cm, and 12,880 μg/cm).

The pH measured at the conclusion of the purging process for all wells ranged from 6.31 (MW-6) to 6.65 (MW-3). The conductivity measured at the conclusion of the purging process for all wells ranged from 0.115 milliSiemens per centimeter (mS/cm) (MW-6) to 0.312 mS/cm (MW-2). The DO measured at the conclusion of the purging process for all wells ranged from 0.20 mg/L (MW-3) to 1.23 mg/L (MW-1). Turbidity was observed to be clear in all wells at the conclusion of the purging process. GEI purged a minimum of three well volumes from each well prior to sample collection. The field forms associated with groundwater parameter measurements are attached as Appendix A to this report.

Chemical Analysis of Groundwater Samples

GEI submitted the samples to OnSite Environmental to test for petroleum hydrocarbon identification using the NWTPH-HCID Method with follow-up to detected analyte(s), when detected, VOCs using the USEPA Method 8260C, PAHs using the USEPA Method 8270D/SIM, PCBs using the USEPA Method 8082A, Total and Dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the USEPA Method 200.8/7470A, dissolved MTCA 5 Metals using the USEPA Method 200.8/7470A, and hexavalent chromium using the USEPA Method SM3500-CrB.

Sample Handling, Storage, and Shipment

The samples were packaged properly according to the current DOT requirements. Ice was added to ensure that the samples were kept at approximately 4 degrees Celsius (˚C). The samples were kept chilled between the time of the sampling and the time of the analytical processing.

The samples were hand-delivered to the analytical laboratory on their collection date under proper chain-of-custody protocols on the same day as collection. A field logbook documented the field activities, observations, and other relevant information regarding the sampling.

Equipment Decontamination

The samples were collected at each sample location using procedures designed to minimize the risk of cross contamination of the samples. All sampling equipment that could come into direct contact with sample media was decontaminated before starting work and between each sampling location. The following procedure was used for cleaning all sampling equipment:

- Remove gross contamination by brushing/wiping and rinsing with potable water.
- Wash and scrub with laboratory grade detergent (i.e., Aquinox®).
- Rinse with distilled water.
- Air dried.

Groundwater Sample Analytical Results

Laboratory analyses of all groundwater samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels. These are further discussed below and presented in Table 1 (Attachment 2). The laboratory analytical report is attached as Appendix B to this report.

Petroleum Hydrocarbons

Laboratory analysis resulted in no detections of petroleum hydrocarbons at concentrations equal to or exceeding their respective laboratory PQLs.

Volatile Organic Compounds

Laboratory analysis resulted in no detections of VOCs at concentrations equal to or exceeding their respective laboratory PQLs.

Polycyclic Aromatic Hydrocarbons

Laboratory analysis resulted in the detection of one PAH (naphthalene) at a concentration equal exceeding its respective laboratory PQL. Naphthalene was detected in the groundwater sample collected from MW-7 at a concentration of 0.55 μg/L, below its MTCA Method A Cleanup Level of 160 μg/L. Naphthalene was not detected in the groundwater sample collected during the initial groundwater monitoring event. Laboratory analysis resulted in no other detections of PAHs at concentrations equal to or exceeding their respective laboratory PQLs.

Polychlorinated Biphenyls

Laboratory analysis resulted in no detections of PCBs at concentrations equal to or exceeding their respective laboratory PQLs.

Total Metals

Laboratory analysis resulted in the detection of one metal (arsenic) at a concentration equal exceeding its respective laboratory PQL. Arsenic was detected in the groundwater sample collected from MW-6 at a concentration of 3.5 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L. Laboratory analysis resulted in no other detections of total metals at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Metals

Laboratory analysis resulted in no detections of dissolved metals at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Hexavalent Chromium

Laboratory analysis resulted in no detections of dissolved hexavalent chromium at concentrations equal to or exceeding its respective laboratory PQLs. However, it should be noted that the PQL was elevated very slightly above its MTCA Method B Cleanup Level.

CONCLUSIONS AND RECOMMENDATIONS

Based on laboratory analyses, the groundwater in all groundwater monitoring wells sampled during this monitoring event were confirmed to have either non-detectable concentrations of contaminants of concern or detected concentrations at levels below their respective MTCA Method A and/or MTCA Method B Cleanup Action Levels.

GEI recommends continued monitoring of the groundwater in all seven groundwater monitoring wells.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact me at the addresses listed at the top of this letter.

Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA
President

ATTACHMENT 1

FIGURES

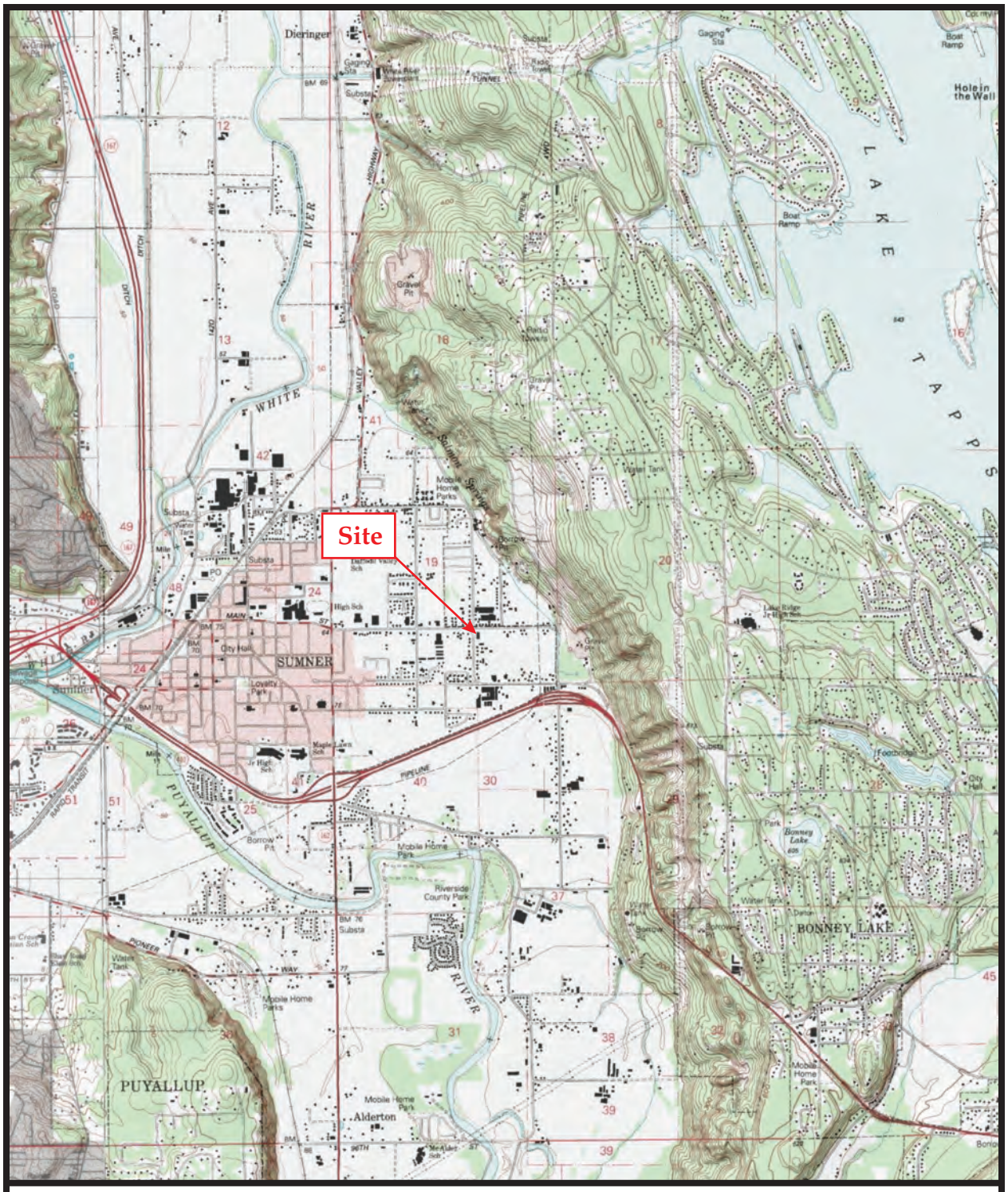


FIGURE 1 — SITE LOCATION MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: MyTopo.com, GEI Project 37018

N

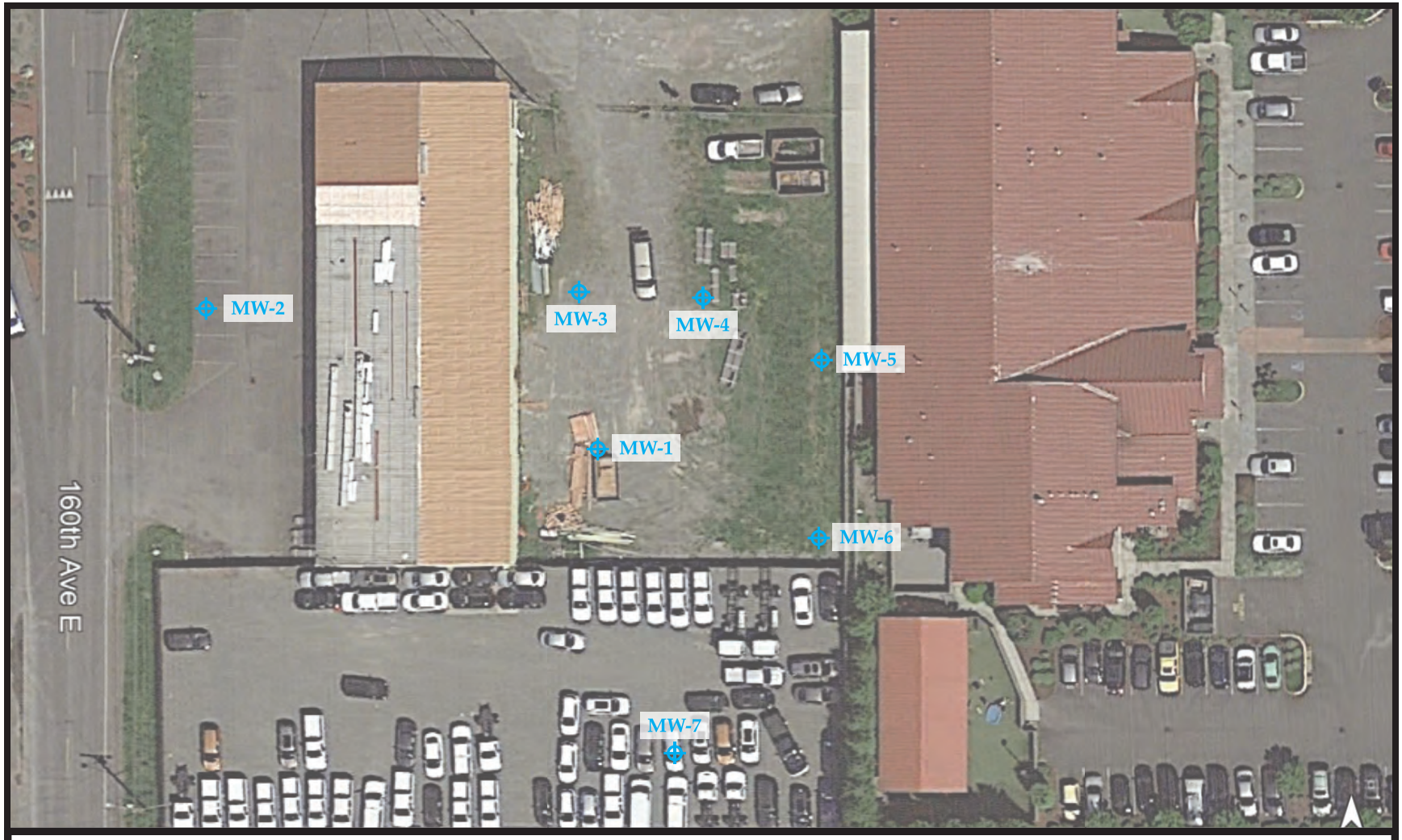
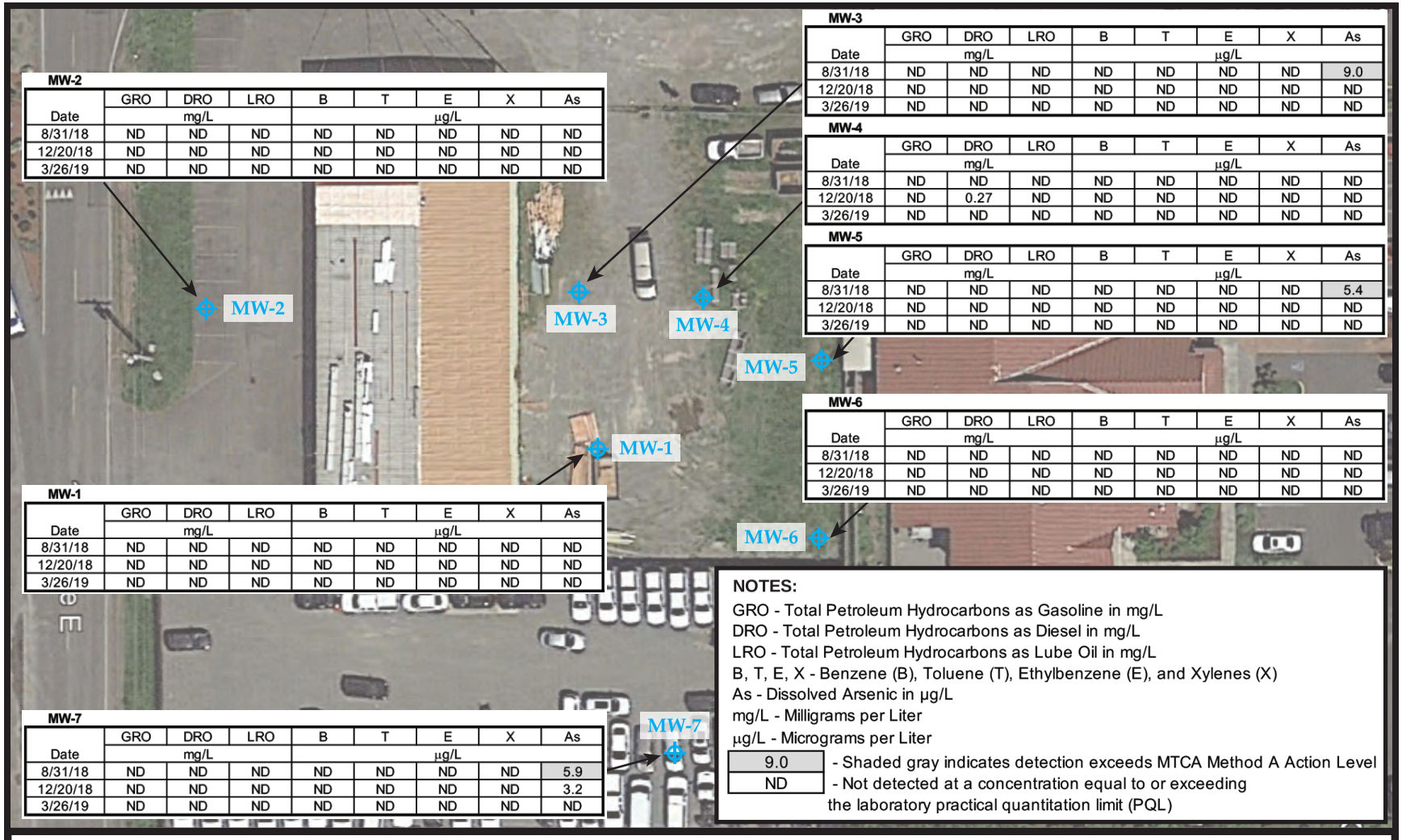


FIGURE 2—GROUNDWATER MONITORING WELL MAP
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N



MW-2

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-3

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	9.0
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-4

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	0.27	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-5

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.4
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-6

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-1

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-7

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.9
12/20/18	ND	ND	ND	ND	ND	ND	ND	3.2
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

GRO - Total Petroleum Hydrocarbons as Gasoline in mg/L
DRO - Total Petroleum Hydrocarbons as Diesel in mg/L
LRO - Total Petroleum Hydrocarbons as Lube Oil in mg/L
B, T, E, X - Benzene (B), Toluene (T), Ethylbenzene (E), and Xylenes (X)
As - Dissolved Arsenic in µg/L
mg/L - Milligrams per Liter
µg/L - Micrograms per Liter

9.0	- Shaded gray indicates detection exceeds MTCA Method A Action Level
ND	- Not detected at a concentration equal to or exceeding the laboratory practical quantitation limit (PQL)

FIGURE 3—GROUNDWATER MONITORING WELL SELECT ANALYTICAL RESULTS

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project 37018

N

ATTACHMENT 2

ANALYTICAL TABLES

Table 1
Select Laboratory
Analytical Results
for Groundwater Samples
National Auto Parts
GEI Project #37018

Sample Number	Date of Sample	Analyte																							
		Total Petroleum Hydrocarbons (mg/L)			Fuel Constituents (µg/L)				Polycyclic Aromatic Hydrocarbons (µg/L)			Polychlorinated Biphenyl (µg/L)	Dissolved Metals (µg/L)						Hexavalent Chromium (µg/L)	Total Metals (µg/L)					
		Gasoline	Diesel	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury
MW-1	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	ND <25	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	ND <28	ND <4.4	ND <11	ND <1.1	--
	12/20/2018	ND <0.10	ND <0.26	ND <0.41	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-2	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	39	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	59	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-3	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.095	ND <0.095	ND <0.095	ND <0.047	**9.0**	37	ND <4.0	ND <10	ND <1.0	--	ND <10	**12.0**	69	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-4	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.096	ND <0.096	ND <0.096	ND <0.047	ND <3.0	40	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	63	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	0.27	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-5	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	**5.4**	43	ND <4.0	ND <10	ND <1.0	--	ND <10	**5.8**	50	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-6	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	52	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	57	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	3.5	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-7	8/31/2018	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.097	ND <0.097	ND <0.097	ND <0.047	**5.9**	32	ND <4.0	ND <10	ND <1.0	--	ND <10	**6.4**	34	ND <4.0	ND <10	ND <1.0	<1.0
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	3.2	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MTCA Method Action Level		**0.8/1.0[a]**	**0.5**	**0.5**	**5.0**	**1,000**	**700**	**1,000**	**NVE**	**NVE**	**480[b]**	**0.1**	**5.0/10[c]**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**	**48**	**5.0**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**

Notes:

mg/L	Milligrams per liter
µg/L	Micrograms per liter
a	Model Toxics Control Act (MTCA) Method A Action Level is 0.8 mg/L with benzene present and 1.0 mg/L without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Action Level is 5.0 µg/L; Ecology's Maximum Contaminant Level is 10 mg/L
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
9.0	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established
--	Not analyzed

APPENDIX A

FIELD FORMS

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-1 Date & Time Started 3/26/19 0905

Project Location: 16008 60th St East Well Location & diameter SE of Bldg 1"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.68 Depth to well bottom 8.25

Water column in well 4.57 Gallons per foot 0.077 Gallons in well 0.35 (x3=1.06)

Purging method Peristaltic Pump Volume purged 3.25 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys
Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements) Water Quality parameters by YSI 556 MPS & Extech SDL 100
0920	7.42	6.25/6.12	0.200	clr	3.65	clr	0.25 gal total ORP= 25mV
0925	7.45	6.06/5.91	0.198	clr	1.93	clr	0.75 gal total ORP = 27 mV
0930	7.45	6.05/5.92	0.197	clr	1.79	clr	1.25 gal total ORP = 27 mV
0935	7.46	6.47/6.02	0.195	clr	1.25	clr	1.75 gal total ORP = 27 mV
0940	7.47	6.48/6.04	0.194	clr	1.24	clr	2.25 gal total ORP= 28mV
0945	7.47	6.48/6.06	0.194	clr	1.23	clr	2.75 gal total ORP= 28mV
0950	7.48	6.48/6.06	0.194	clr	1.23	clr	3.25 gal total ORP= 28mV
							0955 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature **Date** 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-2 Date & Time Started 3/26/19 1030

Project Location: 16008 60th St East Well Location & diameter W of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.71 Depth to well bottom 13.8

Water column in well 10.09 Gallons per foot 0.16 Gallons in well 1.61 (x3 = 4.84)

Purging method Peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements) using YSI 556 MPS & Eytech SDL 100
1035	10.16	6.73/6.83	0.314	clr	2.19	clr	0.25 gal total ORP = 22 mV
1040	10.11	6.73/6.83	0.315	clr	1.93	clr	0.75 gal total ORP = 22 mV
1045	10.08	6.73/6.82	0.315	clr	1.62	clr	1.25 gal total ORP = 21 mV
1050	10.02	6.64/6.78	0.314	clr	0.91	clr	1.75 gal total ORP = 21 mV
1055	10.02	6.65/6.77	0.314	clr	0.42	clr	2.25 gal total ORP = 19 mV
1100	10.03	6.64/6.73	0.314	clr	0.41	clr	3.0 gal total ORP = 19 mV
1105	10.03	6.64/6.71	0.313	clr	0.41	clr	4.0 gal total ORP = 19 mV
1110	10.02	6.64/6.70	0.312	clr	0.40	clr	5.0 gal total ORP = 19 mV
							1112 collect Sample

Well casing volumes (gal/ft) – 1.25″=0.077, 1.5″=0.10, 2″=0.16, 2.5″=0.24, 3″=0.37, 3.5=0.50, 4″=0.65, 6″=1.46

Signature Date 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-3 Date & Time Started 3/26/19 1700

Project Location: 16008 60th St East Well Location & diameter E of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.15 Depth to well bottom 13.63

Water column in well 9.48 Gallons per foot 0.16 Gallons in well 1.5168 (x3=4.55)

Purging method peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Using YSI 556 MPS & Extech SDL 100 for Parameters

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)	
1705	10.21	6.49 / 5.90	0.160	clr	2.08	clr	0.5 gal total	ORP = 29 mV
1710	9.81	6.56 / 5.84	0.169	clr	0.62	clr	1.25 gal total	ORP = 24 mV
1715	9.70	6.62 / 6.29	0.182	clr	0.33	clr	2.0 gal total	ORP = 20 mV
1720	9.80	6.65 / 6.35	0.188	clr	0.27	clr	2.75 gal total	ORP = 19 mV
1725	9.68	6.67 / 6.37	0.190	clr	0.19	clr	3.5 gal total	ORP = 19 mV
1730	9.65	6.65 / 6.34	0.191	clr	0.20	clr	4.25 gal total	ORP = 19 mV
1735	9.66	6.65 / 6.34	0.192	clr	0.20	clr	5.0 gal total	ORP = 19 mV
							1745 collect Sample	

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-4 Date & Time Started 3/26/19 1240

Project Location: 16008 60th St East Well Location & diameter NE of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.84 Depth to well bottom 13.78

Water column in well 9.94 Gallons per foot 0.16 Gallons in well 1.59 (x3=4.77)

Purging method Peristaltic Pump Volume purged 5.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements) YSI 556 mPS & Extech SDL100 for parameters
1245	10.19	6.33/6.42	0.147	mod	1.49	orange	0.5 gal total ORP= 37 mV
1250	10.10	6.37/6.31	0.149	mod	1.21	slt orange	1.0 gal total ORP= 37 mV
1255	10.19	6.44/6.39	0.173	mod	1.10	slt orange	1.75 gal total ORP= 31 mV
1300	10.14	6.45/6.43	0.174	mod	0.54	orange	2.5 gal total ORP = 28 mV
1305	9.64	6.48/6.35	0.186	slight	0.44	clr	3.25 gal total ORP= 29 mV
1310	9.66	6.51/6.42	0.207	clr	0.40	clr	4.0 gal total ORP= 27 mV
1315	9.69	6.54/6.45	0.210	clr	0.38	clr	4.75 gal total ORP= 27 mV
1320	9.68	6.58/6.45	0.220	clr	0.38	clr	5.5 gal total ORP= 25 mV
							1329 collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-5 Date & Time Started 3/26/19 1544

Project Location: 16008 60th St East Well Location & diameter E side 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.95 Depth to well bottom 14.29

Water column in well 10.34 Gallons per foot 0.16 Gallons in well 1.65 (x3=4.96)

Purging method Peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1550	9.12	6.29 / 5.85	0.119	slt	3.18	slt orange	0.5 gal total ORP = 39 mV
1555	9.09	6.34 / 5.77	0.120	slt	1.01	slt orange	1.25 gal total ORP = 37 mV
1600	9.20	6.34 / 5.79	0.130	clr	0.55	clr	2.0 gal total ORP = 37 mV
1605	9.19	6.35 / 5.87	0.128	clr	0.39	clr	2.75 gal total ORP = 36 mV
1610	9.21	6.35 / 5.89	0.138	clr	0.29	clr	3.5 gal total ORP = 37 mV
1615	9.21	6.35 / 5.89	0.139	clr	0.29	clr	4.25 gal total ORP = 37 mV
1620	9.20	6.35 / 5.88	0.140	clr	0.28	clr	5.0 gal total ORP = 36 mV
							1625 collect water sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-6 Date & Time Started 3/26/19 1400

Project Location: 16008 60th St East Well Location & diameter

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.55 Depth to well bottom 14.10

Water column in well 10.55 Gallons per foot 0.16 Gallons in well 1.688 (x3 = 5.1)

Purging method Peristaltic Pump Volume purged 5.75 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)	
							Using YSI 556 MPS & Extech SDL 100 for Parameters	
1405	9.26	6.21 / 5.92	0.099	mod	1.92	orange	0.5 gal total	ORP = 44 mV
1410	9.11	6.26 / 6.20	0.106	Slight	0.81	Slight orange	1.25 gal total	ORP = 40 mV
1415	9.05	6.28 / 6.29	0.156	clr	0.48	clr	2.0 gal total	ORP = 40mV
1420	9.16	6.30 / 6.36	0.111	clr	0.37	clr	2.75 gal total	ORP = 38 mV
1425	9.03	6.30 / 6.30	0.114	clr	0.38	clr	3.5 gal total	ORP = 38mV
1430	9.08	6.30 / 6.29	0.114	clr	0.36	clr	4.25 gal total	ORP = 38 mV
1435	9.10	6.31 / 6.30	0.115	clr	0.37	clr	5.0 gal total	ORP = 37 mV
1440	9.09	6.31 / 6.30	0.115	clr	0.36	clr	5.75 gal total	ORP = 37 mV
							1444 collect Sample	

Well casing volumes (gal/ft) – 1.25″=0.077, 1.5″=0.10, 2″=0.16, 2.5″=0.24, 3″=0.37, 3.5=0.50, 4″=0.65, 6″=1.46

Signature **Date** 3/26/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-7 Date & Time Started 3/26/19 1142

Project Location: 16008 60th St East Well Location & diameter S of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 3.55 Depth to well bottom 13.85

Water column in well 10.3 Gallons per foot 0.16 Gallons in well 1.65 (x3=4.94)

Purging method Peristaltic Pump Volume purged _____ Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)_____

Time	Temperature (°C)	pH	mg/cm Conductivity (µS)	Turbidity	mg/L Dissolved Oxygen	Water Color	DESCRIPTION (Volume purged between measurements)	use YSI 556MPS & Extech SDL100 for Parameters
1145	10.26	6.72 / 6.59	0.241	mod turb	6.62	orange	0.25 gal total	ORP= 20mV
1150	10.26	6.58 / 6.34	0.234	slight turb	1.22	clr	1.0 gal total	ORP= 23mV
1155	10.24	6.53 / 6.32	0.242	clr	1.18	clr	1.75 gal total	ORP= 26mV
1200	10.24	6.51 / 6.37	0.243	clr	0.88	clr	2.5 gal total	ORP= 26mV
1205	10.19	6.52 / 6.39	0.243	clr	0.80	clr	3.25 gal total	ORP= 26mV
1210	10.18	6.53 / 6.40	0.240	clr	0.74	clr	4.0 gal total	ORP= 26mV
1215	10.18	6.55 / 6.41	0.239	clr	0.68	clr	5.0 gal total	ORP= 26mV
							1218 collect water Sample	

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature _____ **Date** 3/26/19

APPENDIX B

LABORATORY ANALYTICAL REPORT

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 4, 2019

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1903-240

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on March 27, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

Case Narrative

Samples were collected on March 26, 2019 and received by the laboratory on March 27, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Hexavalent Chromium SM 3500-Cr B Analysis

The practical quantitation limit is elevated due to interferences present in the samples.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*76*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0327W2					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	3-27-19	3-27-19	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	3-27-19	3-27-19	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	3-27-19	3-27-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				

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Samples Submitted: March 27, 2019
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Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Samples Submitted: March 27, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*94*	*75-127*
Toluene-d8	*100*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Samples Submitted: March 27, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*93*	*75-127*
Toluene-d8	*98*	*80-127*
4-Bromofluorobenzene	*98*	*78-125*

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*92*	*75-127*
Toluene-d8	*98*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*95*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*92*	*75-127*
Toluene-d8	*99*	*80-127*
4-Bromofluorobenzene	*98*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0328W2					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloromethane	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromomethane	ND	0.27	EPA 8260C	3-28-19	3-28-19	
Chloroethane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Acetone	ND	6.3	EPA 8260C	3-28-19	3-28-19	
Iodomethane	ND	2.4	EPA 8260C	3-28-19	3-28-19	
Carbon Disulfide	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methylene Chloride	ND	1.3	EPA 8260C	3-28-19	3-28-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Vinyl Acetate	ND	1.0	EPA 8260C	3-28-19	3-28-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Butanone	ND	5.0	EPA 8260C	3-28-19	3-28-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chloroform	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Benzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Trichloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Dibromomethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Toluene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0328W2					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Hexanone	ND	2.0	EPA 8260C	3-28-19	3-28-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Ethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
m,p-Xylene	ND	0.40	EPA 8260C	3-28-19	3-28-19	
o-Xylene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Styrene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromoform	ND	1.3	EPA 8260C	3-28-19	3-28-19	
Isopropylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Bromobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Propylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
n-Butylbenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	3-28-19	3-28-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
Naphthalene	ND	1.0	EPA 8260C	3-28-19	3-28-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-28-19	3-28-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*93*	*75-127*
Toluene-d8	*99*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0328W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.15**	**9.11**	10.0	10.0	92	91	62-129	0	15	
Benzene	**9.16**	**9.09**	10.0	10.0	92	91	77-127	1	15	
Trichloroethene	**10.5**	**10.4**	10.0	10.0	105	104	70-120	1	15	
Toluene	**10.1**	**9.93**	10.0	10.0	101	99	82-123	2	15	
Chlorobenzene	**10.5**	**10.2**	10.0	10.0	105	102	79-120	3	15	
Surrogate:										
Dibromofluoromethane					*93*	*95*	*75-127*			
Toluene-d8					*100*	*100*	*80-127*			
4-Bromofluorobenzene					*98*	*100*	*78-125*			

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Naphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*56*	*21 - 110*				
Pyrene-d10	*78*	*19 - 111*				
Terphenyl-d14	*76*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*53*	*21 - 110*				
Pyrene-d10	*76*	*19 - 111*				
Terphenyl-d14	*77*	*32 - 137*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*21 - 110*				
Pyrene-d10	*82*	*19 - 111*				
Terphenyl-d14	*85*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Naphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*50*	*21 - 110*				
Pyrene-d10	*67*	*19 - 111*				
Terphenyl-d14	*74*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Naphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*58*	*21 - 110*				
Pyrene-d10	*80*	*19 - 111*				
Terphenyl-d14	*83*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Naphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*52*	*21 - 110*				
Pyrene-d10	*81*	*19 - 111*				
Terphenyl-d14	*85*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Naphthalene	**0.55**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*41*	*21 - 110*				
Pyrene-d10	*70*	*19 - 111*				
Terphenyl-d14	*74*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0328W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*21 - 110*				
Pyrene-d10	*89*	*19 - 111*				
Terphenyl-d14	*117*	*32 - 137*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0328W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.289**	**0.278**	0.500	0.500	58	56	28 - 109	4	38	
Acenaphthylene	**0.338**	**0.345**	0.500	0.500	68	69	37 - 111	2	26	
Acenaphthene	**0.357**	**0.412**	0.500	0.500	71	82	41 - 113	14	33	
Fluorene	**0.391**	**0.392**	0.500	0.500	78	78	47 - 114	0	23	
Phenanthrene	**0.397**	**0.387**	0.500	0.500	79	77	50 - 113	3	18	
Anthracene	**0.395**	**0.378**	0.500	0.500	79	76	50 - 117	4	18	
Fluoranthene	**0.423**	**0.409**	0.500	0.500	85	82	52 - 120	3	15	
Pyrene	**0.434**	**0.465**	0.500	0.500	87	93	51 - 128	7	31	
Benzo[a]anthracene	**0.396**	**0.371**	0.500	0.500	79	74	57 - 127	7	15	
Chrysene	**0.416**	**0.393**	0.500	0.500	83	79	51 - 120	6	15	
Benzo[b]fluoranthene	**0.473**	**0.444**	0.500	0.500	95	89	54 - 124	6	17	
Benzo(j,k)fluoranthene	**0.444**	**0.415**	0.500	0.500	89	83	50 - 127	7	18	
Benzo[a]pyrene	**0.456**	**0.405**	0.500	0.500	91	81	50 - 120	12	16	
Indeno(1,2,3-c,d)pyrene	**0.472**	**0.432**	0.500	0.500	94	86	46 - 132	9	20	
Dibenz[a,h]anthracene	**0.455**	**0.425**	0.500	0.500	91	85	49 - 129	7	18	
Benzo[g,h,i]perylene	**0.441**	**0.405**	0.500	0.500	88	81	45 - 130	9	19	
Surrogate:										
2-Fluorobiphenyl					*59*	*68*	*21 - 110*			
Pyrene-d10					*89*	*79*	*19 - 111*			
Terphenyl-d14					*95*	*102*	*32 - 137*			

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*44-144*				
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*104*	*44-144*				
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*100*	*44-144*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Aroclor 1016	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*86*	*44-144*				
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*110*	*44-144*				
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*111*	*44-144*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*105*	*44-144*				

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0328W1					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-28-19	3-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*103*	*44-144*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0328W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.514**	**0.544**	0.500	0.500	N/A	**103**	**109**	71-131	6	12	
Surrogate:											
DCB						*107*	*116*	*44-144*			

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Arsenic	**3.5**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Arsenic	**ND**	3.3	EPA 200.8	4-2-19	4-2-19	
Cadmium	**ND**	4.4	EPA 200.8	4-2-19	4-2-19	
Chromium	**ND**	11	EPA 200.8	4-2-19	4-2-19	
Lead	**ND**	1.1	EPA 200.8	4-2-19	4-2-19	
Mercury	**ND**	0.50	EPA 7470A	3-28-19	3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0402W1					
Arsenic	**ND**	3.3	EPA 200.8	3-28-19	3-28-19	
Cadmium	**ND**	4.4	EPA 200.8	3-28-19	3-28-19	
Chromium	**ND**	11	EPA 200.8	3-28-19	3-28-19	
Lead	**ND**	1.1	EPA 200.8	3-28-19	3-28-19	
Laboratory ID:	MB0328W2					
Mercury	**ND**	0.50	EPA 7470A	4-2-19	4-2-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-003-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	04-240-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-003-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**124**	**119**	111	111	ND	**112**	**107**	75-125	4	20	
Cadmium	**114**	**116**	111	111	ND	**103**	**104**	75-125	1	20	
Chromium	**118**	**112**	111	111	ND	**107**	**101**	75-125	5	20	
Lead	**104**	**105**	111	111	ND	**94**	**95**	75-125	1	20	
Laboratory ID:	04-240-01										
Mercury	**6.33**	**6.38**	12.5	12.5	ND	**51**	**51**	75-125	1	20	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Arsenic	**ND**	3.0	EPA 200.8		3-28-19	
Cadmium	**ND**	4.0	EPA 200.8		3-28-19	
Chromium	**ND**	10	EPA 200.8		3-28-19	
Lead	**ND**	1.0	EPA 200.8		3-28-19	
Mercury	**ND**	0.50	EPA 7470A		3-28-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0327F1					
Arsenic	**ND**	3.0	EPA 200.8	3-27-19	3-28-19	
Cadmium	**ND**	4.0	EPA 200.8	3-27-19	3-28-19	
Chromium	**ND**	10	EPA 200.8	3-27-19	3-28-19	
Lead	**ND**	1.0	EPA 200.8	3-27-19	3-28-19	
Laboratory ID:	MB0327F1					
Mercury	**ND**	0.50	EPA 7470A	3-27-19	3-28-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-244-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	03-240-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	03-244-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**83.2**	**82.0**	80.0	80.0	ND	**104**	**103**	75-125	1	20	
Cadmium	**82.2**	**83.0**	80.0	80.0	ND	**103**	**104**	75-125	1	20	
Chromium	**70.6**	**70.4**	80.0	80.0	ND	**88**	**88**	75-125	0	20	
Lead	**79.6**	**80.0**	80.0	80.0	ND	**100**	**100**	75-125	1	20	
Laboratory ID:	03-240-01										
Mercury	**6.68**	**6.63**	6.25	6.25	ND	**107**	**106**	75-125	1	20	

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Laboratory Reference: 1903-240
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-240-01					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-2**					
Laboratory ID:	03-240-02					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-3**					
Laboratory ID:	03-240-03					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-4**					
Laboratory ID:	03-240-04					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-5**					
Laboratory ID:	03-240-05					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-6**					
Laboratory ID:	03-240-06					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	
Client ID:	**MW-7**					
Laboratory ID:	03-240-07					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	

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Date of Report: April 4, 2019
Samples Submitted: March 27, 2019
Laboratory Reference: 1903-240
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0327W1					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	3-27-19	3-27-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-240-03										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	03-240-03										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**411**	**398**	500	500	ND	82	80	75-125	3	20	
SPIKE BLANK											
Laboratory ID:	SB0327W1										
	SB		SB			SB					
Hexavalent Chromium	**101**		100		NA	101		85-115	NA	NA	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
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Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National Auto
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-240

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Metals MTCA	HEX Chromium			% Moisture
1	MW-1	3/26/19	0955	W	14	X				X				X	X					X			X	X			
2	MW-2		1112			X				X				X	X					X			X	X			
3	MW-3		1745			X				X				X	X					X			X	X			
4	MW-4		1329			X				X				X	X					X			X	X			
5	MW-5		1625			X				X				X	X					X			X	X			
6	MW-6		1444			X				X				X	X					X			X	X			
7	MW-7		1218			X				X				X	X					X			X	X			

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	3/27/19	0807
Received		OSE	3/27/19	0807
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Containers which have field filtered are marked

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

August 18, 2019

Sunset Chevrolet, Inc.
Mitchell Development
Attn: Ms. Cristi Acuna
910 Traffic Avenue
Sumner, WA 98390

E-mailed to: CristiAcuna@SunsetChev.com

SUBJECT: *GROUNDWATER MONITORING REPORT FOR THE NATIONAL AUTO PARTS PROPERTY AT 16008 60TH STREET EAST, SUMNER, WASHINGTON 98390; WASHINGTON STATE DEPARTMWENT OF ECOLOGY SITE ID #1304, CLEANUP SITE #3653, VCP PROJECT #SW1547*

Dear Ms. Acuna:

This letter report presents Galloway Environmental, Inc.'s (GEI's) findings from recent sampling of seven groundwater monitoring wells at the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington (hereafter referred to as "*the Site*." The Washington State Department of Ecology (Ecology) Site Identification (ID) for the Site is #1304. Ecology's Cleanup Site ID for the Site is #3653. Ecology's Voluntary Cleanup Program (VCP) Project ID for the Site is SW1547.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with the property listed as parcel numbers 0520198006 and 2006198700. Parcel 0520198006 is listed as "Phil's Speed Shop, LLC" which consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse. Parcel 2006198700 is listed as "Sumner National Auto Parts, Inc" and does not have acreage listed.

This work was conducted as a continuance to an independent remedial action undertaken by GEI for Mr. Phil Mitchell with the primary goal to evaluate groundwater conditions upgradient and downgradient of the former source area of contamination to confirm the effectiveness of the recent Independent Remedial Action at the Site.

BACKGROUND

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop since the facility was constructed in 1979 until its recent closure. The machine shop area occupied approximately 4,500 sf and the retail sales and storage area occupied approximately 3,000 sf.

Reportedly, an unknown amount of spent parts cleaning solutions and caustic spray were released to a concrete slab and soils along the eastern side of the building near the structure's exterior door. Ecology responded to a citizen complaint regarding the spill and determined that the Site was impacted by petroleum hydrocarbons, metals, and several parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "*Work Plan*."

Between October 2017 and January 2018, a remedial excavation was conducted at the Site in general accordance with the Work Plan. The primary objective of remediating the Site was to ensure the protection of human health and the environment.

The remedial excavation generally included the removal of 262.92 tons of impacted soils. The excavated soil was transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the Waste Disposal Authorization (WDA) number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of concern (COCs) from the final limits of excavation (confirmation samples).

Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been satisfactorily removed from the Site.

Between August 13, 2018 and August 14, 2018, GEI oversaw the installation of six groundwater monitoring wells at the Site. One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015. The six additional wells (MW-2 through MW-7) were subsequently installed in general accordance with the Work Plan and GEI's proposal number 2709.03, dated September 7, 2017. The installation included one well in the western perimeter of the Site (MW-2), two north of the remedial excavation area (MW-3 and MW-4), two east of the remedial excavation area (MW-5 and MW-6), and one in the upgradient position (MW-7). The locations are depicted in Figure 2 of Attachment 1 of this report.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated photoionization detector [PID]) readings. GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. At each sample point, the driller advanced an 18-inch long split spoon sampling device which was advanced by repeatedly dropping a 140-pound drop hammer onto the sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied containers.

In accordance with the Work Plan and Ecology's Opinion Letter dated July 12, 2017, GEI submitted the soil samples to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) to test for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID), VOCs, PAHs, PCBs, and metals (arsenic, barium, cadmium, chromium, and lead).

Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels.

<u>Quarterly Groundwater Monitoring Quarter 1 – August 31, 2018</u>

On August 31, 2018, GEI conducted the first quarterly groundwater monitoring for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons using the NWTPH-HCID Method, VOCs using the United States Environmental Protection Agency (USEPA) Method 8260C, PAHs using the USEPA Method 8270D/SIM, PCBs using the USEPA Method 8082A, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead) using the USEPA Method 200.8/7470A, and hexavalent chromium using the USEPA Method SM 3500-CR B.

With exception to the groundwater samples collected from MW-3, MW-5, and MW-7, laboratory analyses of all analytes in the groundwater samples resulted in non-detectable concentrations at levels equal to or exceeding their respective laboratory practical quantitation limits (PQLs). Dissolved arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 9.0 micrograms per liter (μg/L), 5.4 μg/L, and 5.9 μg/L, respectively and slightly exceeding the Model Toxics Control Act (MTCA) Method A Cleanup Level of 5.0 μg/L. Total arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 12.0 μg/L, 5.8 μg/L, and 6.4 μg/L, respectively.

<u>Quarterly Groundwater Monitoring Quarter 2 – December 20, 2018</u>

On December 20, 2018, GEI conducted the second quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbon identification with follow-up to detected analyte(s) and dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the analytical methods described in the groundwater monitoring event summary for quarter 1. Petroleum constituents (benzene, toluene, ethylbenzene, and xylenes), PAHs, PCBs, and hexavalent chromium were eliminated from the analyte list during this sampling event since they were not detected at appreciable levels during the groundwater monitoring event in August 2018.

With exception to the groundwater samples collected from MW-4 and MW-7, laboratory analyses of all analytes in the groundwater samples resulted in non-detectable concentrations at levels equal to or exceeding their respective laboratory PQLs. TPH-Diesel was detected in the groundwater sample collected from MW-4 at a concentration of 0.27 milligrams per liter (mg/L), below its MTCA Method A Cleanup Level of 0.5 mg/L. Dissolved arsenic was detected in the groundwater sample collected from MW-7 at a concentration of 3.2 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L.

Quarterly Groundwater Monitoring Quarter 3 – March 26, 2019

On March 26, 2019, GEI conducted the third quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium using the analytical methods described in the groundwater monitoring event summary for quarter 1.

With exception to the groundwater samples collected from MW-6 and MW-7, laboratory analyses of all analytes in the groundwater samples resulted in non-detectable concentrations at levels equal to or exceeding their respective laboratory PQLs. One PAH (i.e., naphthalene) was detected in the groundwater sample collected from MW-7 at a concentration of 0.55 μg/L, below its MTCA Method A Cleanup Level of 160 μg/L. Total arsenic was detected in the groundwater sample collected from MW-6 at a concentration of 3.5 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L.

GROUNDWATER MONITORING QUARTER 4 – JULY 1, 2019

On July 1, 2019, GEI conducted the fourth quarterly groundwater monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium using the analytical methods described in the groundwater monitoring event summary for quarter 1. As with the previous monitoring events, prior to sample collection, GEI gauged and purged each well to determine the depths to groundwater, confirm stabilized groundwater conditions, and attain representative groundwater samples. The purging and sampling methods included the use of a low-flow peristaltic pump and dedicated tubing which directed the samples into new laboratory supplied containers. During the purging process, water quality parameters were measured using a multiparameter water quality meter (model YSI 556 MPS) fitted with a flow-through cell to measure pH, temperature, conductivity, and dissolved oxygen (DO). The meter was calibrated prior to use using a 3-point pH calibration process (pH valued at 4.02, 7.02, and 10.04) and a 3-point conductivity process (conductivity valued at 84 micrograms per centimeter [μg/cm], 1,413 μg/cm, and 12,880 μg/cm).

The pH measured at the conclusion of the purging process for all wells ranged from 5.38 (MW-1) to 6.45 (MW-6). The conductivity measured at the conclusion of the purging process for all wells ranged from 0.163 milliSiemens per centimeter (mS/cm) (MW-7) to 0.315 mS/cm (MW-2). The DO measured at the conclusion of the purging process for all wells ranged from 0.16 mg/L (MW-2) to 0.47 mg/L (MW-1). Turbidity was observed to be clear in all wells at the conclusion of the purging process. GEI purged a minimum of three well volumes from each well prior to sample collection or until water quality parameters were deemed stabilized. The field forms associated with groundwater parameter measurements are attached as Appendix A to this report.

Chemical Analysis of Groundwater Samples

As noted above, GEI submitted the samples to OnSite Environmental to test for petroleum hydrocarbon identification using the NWTPH-HCID Method, VOCs using the USEPA Method 8260C, PAHs using the USEPA Method 8270D/SIM, PCBs using the USEPA Method 8082A, Total and Dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the USEPA Method 200.8/7470A, and hexavalent chromium using the USEPA Method SM3500-Cr B.

Sample Handling, Storage, and Shipment

The samples were packaged properly according to the current DOT requirements. Ice was added to ensure that the samples were kept at approximately 4 degrees Celsius (˚C). The samples were kept chilled between the time of the sampling and the time of the analytical processing.

The samples were hand-delivered to the analytical laboratory within 24 hours of their collection date under proper chain-of-custody protocols. A field logbook documented the field activities, observations, and other relevant information regarding the sampling.

Equipment Decontamination

The samples were collected at each sample location using procedures designed to minimize the risk of cross contamination of the samples. All sampling equipment that could come into direct contact with sample media was decontaminated before starting work and between each sampling location. The following procedure was used for cleaning all sampling equipment:

- Remove gross contamination by brushing/wiping and rinsing with potable water.
- Wash and scrub with laboratory grade detergent (i.e., Aquinox®).
- Rinse with distilled water.
- Air dried.

Groundwater Sample Analytical Results

Laboratory analyses of all groundwater samples are discussed below and presented in Table 1 (Attachment 2). The laboratory analytical report is attached as Appendix B to this report.

Petroleum Hydrocarbons

Laboratory analysis resulted in no detections of petroleum hydrocarbons at concentrations equal to or exceeding their respective laboratory PQLs.

Volatile Organic Compounds

Laboratory analysis resulted in no detections of VOCs at concentrations equal to or exceeding their respective laboratory PQLs.

Polycyclic Aromatic Hydrocarbons

Laboratory analysis resulted in no detections of PAHs at concentrations equal to or exceeding their respective laboratory PQLs.

Polychlorinated Biphenyls

Laboratory analysis resulted in no detections of PCBs at concentrations equal to or exceeding their respective laboratory PQLs.

Total Metals

Laboratory analysis resulted in the detection of total arsenic in the groundwater samples collected from MW-3 and MW-6 at concentrations of 3.4 μg/L and 5.7 μg/L, respectively. The total arsenic detection in the sample collected from MW-6 exceeds its MTCA Method A Cleanup Level of 5.0 μg/L. Laboratory analysis resulted in no other detections of total metals at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Metals

Laboratory analysis resulted in the detection of dissolved arsenic in the groundwater sample collected from MW-3 at a concentration of 3.5 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L. Laboratory analysis resulted in no other detections of dissolved metals at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Hexavalent Chromium

Laboratory analysis resulted in no detections of dissolved hexavalent chromium at concentrations equal to or exceeding its respective laboratory PQLs.

CONCLUSIONS AND RECOMMENDATIONS

Based on laboratory analyses, the site groundwater that was analyzed during this monitoring event were confirmed to have either non-detectable concentrations of contaminants of concern or detected concentrations at levels below their respective MTCA Method A and/or MTCA Method B Cleanup Action Levels with exception to the detection of total arsenic in the groundwater samples collected from MW-6. Laboratory analysis of the more representative dissolved groundwater sample that was collected from the same groundwater monitoring well resulted in a non-detectable concentration for arsenic.

This is the third consecutive quarterly groundwater monitoring event that has confirmed residual concentrations of contaminants of concern (i.e., petroleum, VOCs, PAHs, PCBs, and dissolved metals) are below their respective MTCA Cleanup Levels. Therefore, GEI recommends continued monitoring of the groundwater in the seven groundwater monitoring wells for one additional quarterly groundwater monitoring

event. If laboratory analyses confirm that residual concentrations of contaminants of concern remain below their respective MTCA Cleanup Levels, GEI further recommends requesting a No Further Action (NFA) from Ecology for this site.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact me at the addresses listed at the top of this letter.

Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA
President

ATTACHMENT 1

FIGURES

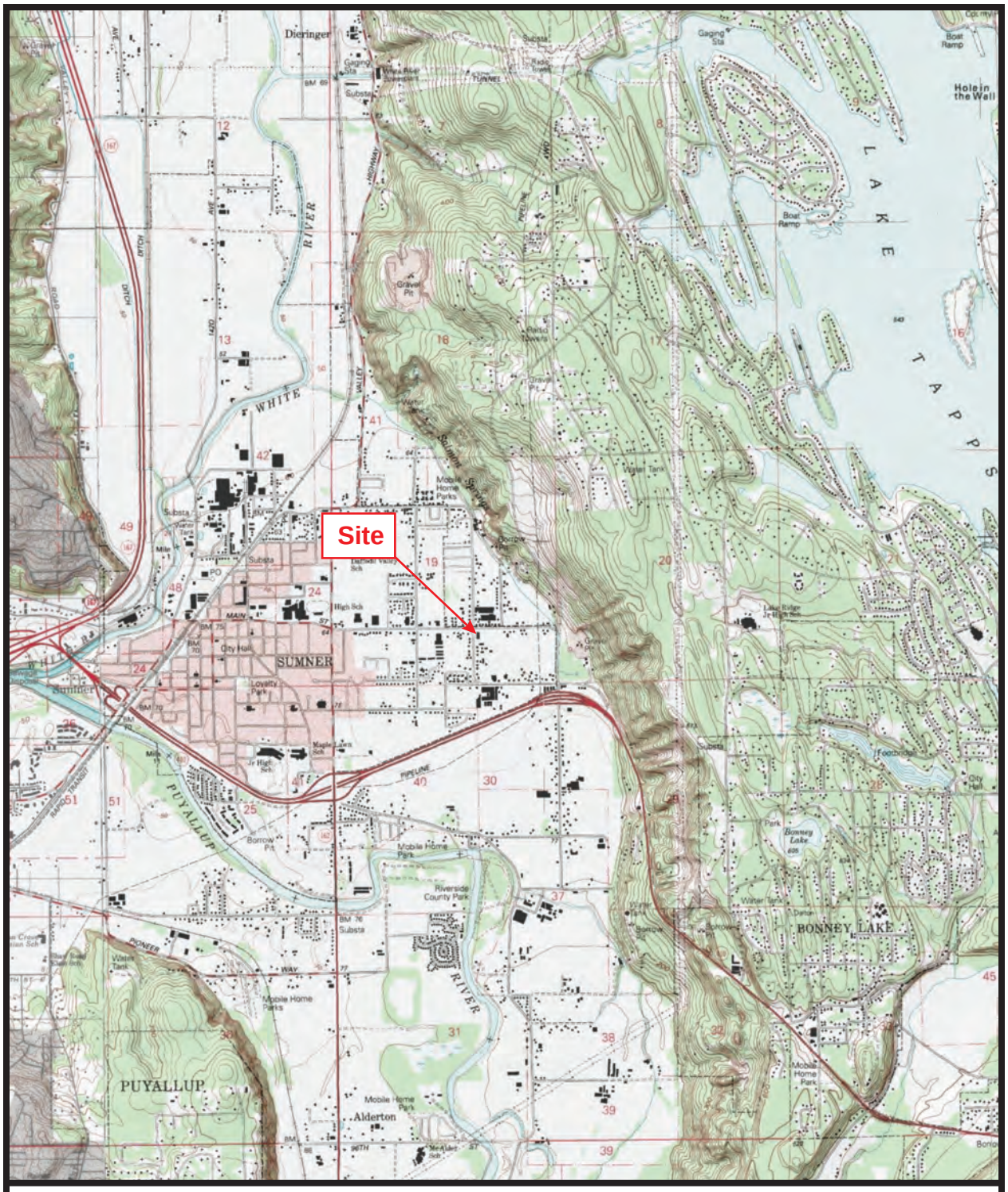


FIGURE 1 — SITE LOCATION MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: MyTopo.com, GEI Project # 37018

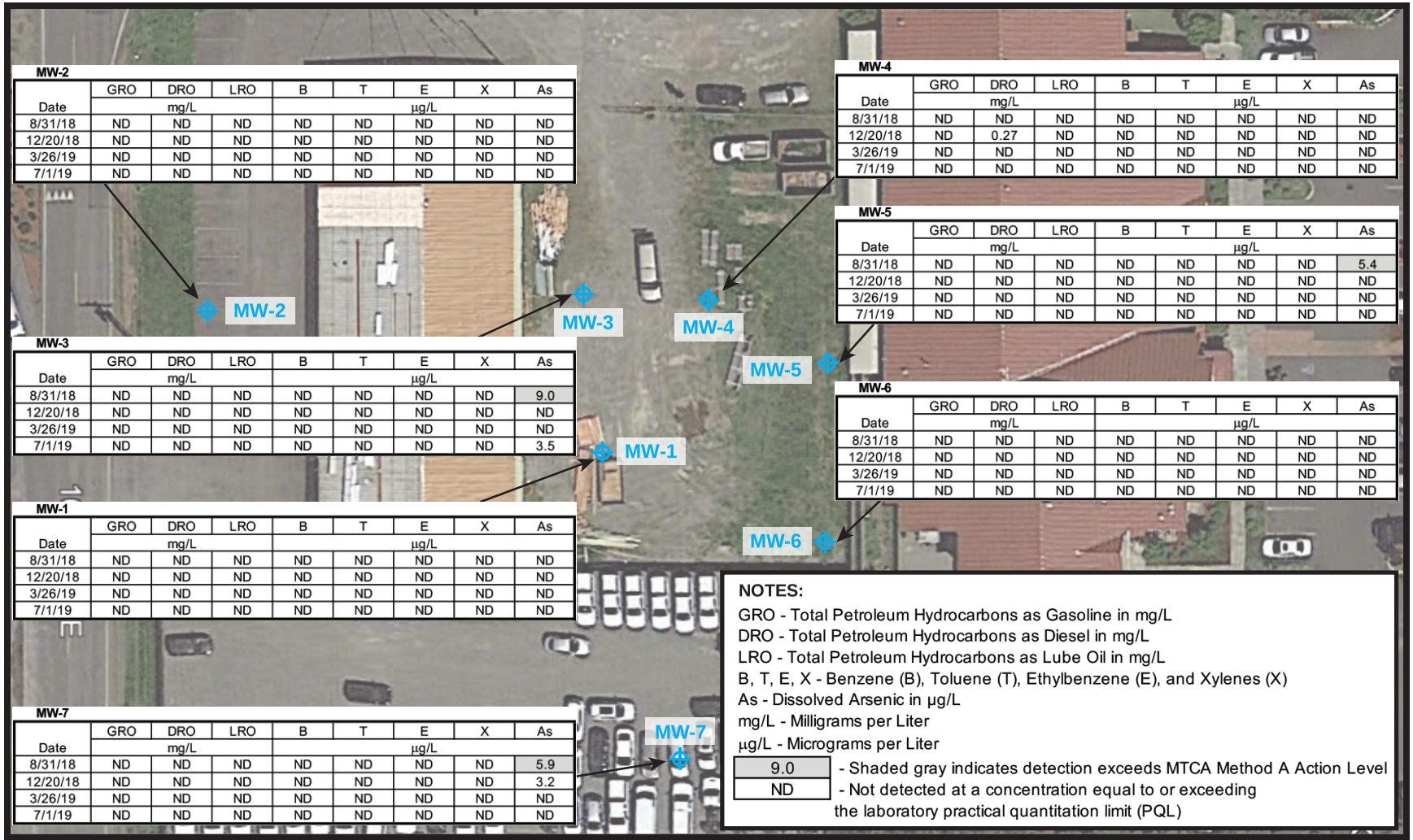
N

FIGURE 2 — GROUNDWATER MONITORING WELL MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project # 37018

N



MW-2

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-3

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	9.0
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	3.5

MW-1

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-7

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.9
12/20/18	ND	ND	ND	ND	ND	ND	ND	3.2
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-4

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	0.27	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-5

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	5.4
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

MW-6

Date	GRO	DRO	LRO	B	T	E	X	As
	mg/L			µg/L				
8/31/18	ND	ND	ND	ND	ND	ND	ND	ND
12/20/18	ND	ND	ND	ND	ND	ND	ND	ND
3/26/19	ND	ND	ND	ND	ND	ND	ND	ND
7/1/19	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

GRO - Total Petroleum Hydrocarbons as Gasoline in mg/L
DRO - Total Petroleum Hydrocarbons as Diesel in mg/L
LRO - Total Petroleum Hydrocarbons as Lube Oil in mg/L
B, T, E, X - Benzene (B), Toluene (T), Ethylbenzene (E), and Xylenes (X)
As - Dissolved Arsenic in µg/L
mg/L - Milligrams per Liter
µg/L - Micrograms per Liter

9.0	- Shaded gray indicates detection exceeds MTCA Method A Action Level
ND	- Not detected at a concentration equal to or exceeding the laboratory practical quantitation limit (PQL)

FIGURE 3 — GROUNDWATER MONITORING WELL SELECT ANALYTICAL RESULTS

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project # 37018

N

ATTACHMENT 2

ANALYTICAL TABLES

Table 1
Select Laboratory
Analytical Results
for Groundwater Samples
National Auto Parts
GEI Project #37018

Sample Number	Date of Sample	Analyte																							
		Total Petroleum Hydrocarbons (mg/L)			Fuel Constituents (µg/L)				Polycyclic Aromatic Hydrocarbons (µg/L)			Polychlorinated Biphenyl (µg/L)	Dissolved Metals (µg/L)						Hexavalent Chromium (µg/L)	Total Metals (µg/L)					
		Gasoline	Diesel	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury
MW-1	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	ND <25	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	ND <28	ND <4.4	ND <11	ND <1.1	--
	12/20/2018	ND <0.10	ND <0.26	ND <0.41	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-2	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	39	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	59	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-3	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.095	ND <0.095	ND <0.095	ND <0.047	**9.0**	37	ND <4.0	ND <10	ND <1.0	--	ND <10	**12.0**	69	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.099	ND <0.099	ND <0.099	ND <0.050	3.5	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	3.4	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-4	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.096	ND <0.096	ND <0.096	ND <0.047	ND <3.0	40	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	63	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	0.27	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.052	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-5	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	**5.4**	43	ND <4.0	ND <10	ND <1.0	--	ND <10	**5.8**	50	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-6	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	52	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	57	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	3.5	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.054	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	**5.7**	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-7	8/31/2018	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.097	ND <0.097	ND <0.097	ND <0.047	**5.9**	32	ND <4.0	ND <10	ND <1.0	--	ND <10	**6.4**	34	ND <4.0	ND <10	ND <1.0	<1.0
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	3.2	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MTCA Method Action Level		**0.8/1.0[a]**	**0.5**	**0.5**	**5.0**	**1,000**	**700**	**1,000**	**NVE**	**NVE**	**480[b]**	**0.1**	**5.0/10[c]**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**	**48**	**5.0**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**

Notes:

mg/L	Milligrams per liter
µg/L	Micrograms per liter
a	Model Toxics Control Act (MTCA) Method A Action Level is 0.8 mg/L with benzene present and 1.0 mg/L without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Action Level is 5.0 µg/L; Ecology's Maximum Contaminant Level is 10 mg/L
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
9.0	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established
--	Not analyzed

APPENDIX A

FIELD FORMS

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-1 Date & Time Started 7/1/19 1045

Project Location: 16008 60th St East Well Location & diameter SE of Bldg 1"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.56 Depth to well bottom 8.25

Water column in well 3.69 Gallons per foot 0.077 Gallons in well 0.284 (x3= 0.85)

Purging method Peristaltic Pump Volume purged _____ Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)_____

pH 5.38/6.05 → measured with Extech SDL100 → measured with YSI 556

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1050	14.13	5.38/6.05	0.278	slt	1.01	slt brown	0.25 gal total ORP= 55mV
1055	13.94	5.35/6.03	0.275	clr	0.75	clr	0.5 gal total ORP= 55mV
1100	13.89	5.36/6.03	0.272	clr	0.65	clr	0.75 gal total ORP= 55mV
1105	13.88	5.37/6.03	0.271	clr	0.63	clr	1.0 gal total ORP= 55mV
1110	13.88	5.37/6.03	0.272	clr	0.62	clr	1.25 gal total ORP= 55mV
1115	13.87	5.38/6.04	0.273	clr	0.48	clr	1.5 gal total ORP= 55mV
1120	13.87	5.38/6.04	0.273	clr	0.47	clr	2.0 gal total ORP= 55mV
							1130 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature _____ **Date** 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-2 Date & Time Started 7/1/19 1210

Project Location: 16008 60th St East Well Location & diameter West of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.62 Depth to well bottom 13.80

Water column in well 9.18 Gallons per foot 0.16 Gallons in well 1.469 (x3 = 4.4)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1215	15.12	6.28 / 6.12	0.328	clr	0.87	clr	0.5 gal total ORP = 50 mV
1220	14.93	6.13 / 6.22	0.317	clr	0.27	clr	1.0 gal total ORP = 49 mV
1225	14.94	6.05 / 6.31	0.317	clr	0.21	clr	1.5 gal total ORP = 49 mV
1230	14.98	6.06 / 6.47	0.391	clr	0.16	clr	2.0 gal total ORP = 49 mV
1235	14.99	6.04 / 6.45	0.316	clr	0.16	clr	2.5 gal total ORP = 49 mV
1240	14.99	6.04 / 6.45	0.315	clr	0.16	clr	3.0 gal total ORP = 49 mV
1245	14.98	6.04 / 6.45	0.315	clr	0.16	clr	3.5 gal total ORP = 49 mV
1250	14.98	6.04 / 6.45	0.315	clr	0.16	clr	4.0 gal total ORP = 49 mV
1255	14.98	6.04 / 6.45	0.315	clr	0.16	clr	4.5 gal total ORP = 49 mV
							1300 collect water sample

pH 6.28 / 6.12 → measured with YSI 556; → measured with Extech SDL 100

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-3 Date & Time Started 7/1/19 1800

Project Location: 16008 60th St East Well Location & diameter E of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 5.07 Depth to well bottom 13.63

Water column in well 8.56 Gallons per foot 0.16 Gallons in well 1.37 (x3= 4.1)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

pH 6.65/6.23
↳ measured by Extech
↳ measured by YSI

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1805	12.49	6.65/6.23	0.245	clr	0.48	clr	0.5 gallons total ORP= 43 mV
1810	12.51	6.63/6.25	0.245	clr	0.43	clr	1.0 gallons total ORP= 42 mV
1815	12.54	6.64/6.25	0.245	clr	0.40	clr	1.5 gallons total ORP= 42 mV
1820	12.53	6.64/6.25	0.245	clr	0.37	clr	2.0 gallons total ORP= 42 mV
1825	12.53	6.64/6.24	0.245	clr	0.36	clr	2.5 gallons total ORP= 42 mV
1830	12.53	6.63/6.24	0.245	clr	0.34	clr	3.0 gallons total ORP= 42 mV
1835	12.52	6.64/6.24	0.244	clr	0.30	clr	3.5 gallons total ORP = 42 mV
1840	12.52	6.64/6.24	0.244	clr	0.30	clr	4.0 gallons total ORP= 42 mV
1845	12.51	6.64/6.24	0.244	clr	0.29	clr	4.5 gallons total ORP= 42 mV
							1850 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-4 Date & Time Started 7/1/19 1320

Project Location: 16008 60th St East Well Location & diameter NE of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.80 Depth to well bottom 13.78

Water column in well 8.98 Gallons per foot 0.16 Gallons in well 1.43 (x3 = 4.31)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1325	11.71	6.00/6.06	0.323	Slight	3.48	Orange	1/2 gallon total ORP= 85 mV
1330	11.26	5.93/5.49	0.295	clr	0.36	clr	1.0 gal total ORP= 86 mV
1335	11.19	6.19/5.35	0.290	clr	0.20	clr	1.5 gal total ORP= 93 mV
1340	11.19	6.21/5.32	0.290	clr	0.20	clr	2.0 gal total ORP= 96 mV
1345	11.18	6.22/5.32	0.290	clr	0.19	clr	2.5 gal total ORP= 96 mV
1350	11.18	6.22/5.32	0.290	clr	0.18	clr	3.0 gal total ORP= 96 mV
1355	11.17	6.21/5.31	0.290	clr	0.18	clr	3.5 gal total ORP= 99 mV
1400	11.17	6.21/5.31	0.290	clr	0.19	clr	4.0 gal total ORP= 99 mV
1405	11.17	6.21/5.32	0.290	clr	0.18	clr	4.5 gal total ORP= 99 mV
							1415 collect sample

pH 6.36/6.06 → measured with Extech SDL100; measured with YSI 556

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-5 Date & Time Started 7/1/19 1700

Project Location: 16008 60th St East Well Location & diameter East Side of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.80 Depth to well bottom 14.29

Water column in well 9.49 Gallons per foot 0.16 Gallons in well 1.51 (x3=4.55)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)
1705	11.25	5.50/6.20	0.270	clr	0.48	clr	0.5 gallons total ORP= 45 mV
1710	11.16	5.59/6.25	0.264	clr	0.32	clr	1.0 gallons total ORP= 42 mV
1715	11.06	5.70/6.28	0.262	clr	0.24	clr	1.5 gallons total ORP= 40 mV
1720	11.02	5.75/6.28	0.262	clr	0.23	clr	2.0 gallons total ORP= 41 mV
1725	11.06	5.77/6.28	0.262	clr	0.23	clr	2.5 gallons total ORP= 41 mV
1730	11.06	5.80/6.28	0.261	clr	0.22	clr	3.0 gallons total ORP= 40 mV
1735	11.07	5.83/6.28	0.261	clr	0.20	clr	3.5 gallons total ORP= 40 mV
1740	11.07	5.83/6.28	0.261	clr	0.20	clr	4.0 gallons total ORP= 40 mV
1745	11.06	5.83/6.28	0.261	clr	0.19	clr	4.5 gallons total ORP= 40 mV

pH 5.50/6.20 → measured by Extech SD400 → measured by YSI

1755 collect sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-6 Date & Time Started 7/1/19 1535

Project Location: 16008 60th St East Well Location & diameter 2" - SE of bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.70 Depth to well bottom 14.10

Water column in well 9.4' Gallons per foot 0.16 Gallons in well 1.5 (x3 = 4.5)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys
Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements)	
1540	11.15	6.52/6.24	0.224	mod	2.98	orange	0.5 gal total	ORP = 49 mV
1545	11.15	6.52/6.23	0.228	clr	2.08	clr	1.0 gal total	ORP = 49 mV
1550	11.14	6.43/6.14	0.225	clr	1.00	clr	1.5 gal total	ORP = 49 mV
1555	11.11	6.43/6.13	0.220	clr	0.30	clr	2.0 gal total	ORP = 50 mV
1600	11.11	6.41/6.13	0.220	clr	0.24	clr	2.5 gal total	ORP = 50 mV
1605	11.11	6.46/6.48	0.221	clr	0.24	clr	3.0 gal total	ORP = 48 mV
1610	11.11	6.46/6.48	0.223	clr	0.24	clr	3.5 gal total	ORP = 48 mV
1615	11.11	6.45/6.47	0.223	clr	0.24	clr	4.0 gal total	ORP = 48 mV
1620	11.11	6.45/6.47	0.223	clr	0.24	clr	4.5 gal total	ORP = 48 mV

pH 6.42/6.13 → measured by Extech; → measured by YSI 556

1630 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 7/1/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-7 Date & Time Started 7/1/19 1430

Project Location: 16008 60th St East Well Location & diameter South of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.41 Depth to well bottom 13.85

Water column in well 9.44 Gallons per foot 0.16 Gallons in well 1.51 (x3=4.53)

Purging method Peristaltic Pump Volume purged 4.8 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements)
1435	14.43	6.01/6.21	0.178	turbid	1.37	orange	0.5 gal total ORP= 45 mV
1440	14.52	6.14/6.20	0.178	Slt turbid	1.01	Slt orange	1.0 gal total ORP= 45 mV
1445	14.54	6.14/6.24	0.177	clr	0.31	clr	1.5 gal total ORP= 45 mV
1450	14.54	6.22/6.22	0.176	clr	0.30	clr	2.0 gal total ORP= 45 mV
1455	14.59	6.30/6.24	0.177	clr	0.29	clr	2.5 gal total ORP= 43 mV
1503	14.60	6.33/6.27	0.176	clr	0.28	clr	3.3 gal total ORP= 43 mV
1508	14.58	6.37/6.31	0.162	clr	0.24	clr	3.8 gal total ORP= 43 mV
1513	14.59	6.37/6.30	0.163	clr	0.24	clr	4.3 gal total ORP= 43 mV
1518	14.59	6.37/6.30	0.163	clr	0.24	clr	4.8 gal total ORP= 43 mV

pH 6.01/6.21 → measured by Extech 4 → measured by YSI 556

1525 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 7/1/19

APPENDIX B

LABORATORY ANALYTICAL REPORT

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 11, 2019

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1907-018

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on July 2, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

Case Narrative

Samples were collected on July 1, 2019 and received by the laboratory on July 2, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*91*	*50-150*				

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Date of Report: July 11, 2019
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HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

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Samples Submitted: July 2, 2019
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Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0703W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	7-3-19	7-3-19	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	7-3-19	7-3-19	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*102*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*103*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*102*	*78-125*

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*102*	*80-127*
4-Bromofluorobenzene	*102*	*78-125*

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*99*	*78-125*

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*103*	*75-127*
Toluene-d8	*100*	*80-127*
4-Bromofluorobenzene	*99*	*78-125*

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Samples Submitted: July 2, 2019
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*101*	*78-125*

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Project: 37018

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*102*	*78-125*

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0703W1					
Dichlorodifluoromethane	ND	0.31	EPA 8260C	7-3-19	7-3-19	
Chloromethane	ND	1.3	EPA 8260C	7-3-19	7-3-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Acetone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Iodomethane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Vinyl Acetate	ND	1.0	EPA 8260C	7-3-19	7-3-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Butanone	ND	5.0	EPA 8260C	7-3-19	7-3-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chloroform	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Benzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Trichloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Dibromomethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Toluene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-3-19	7-3-19	

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Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0703W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Hexanone	ND	2.0	EPA 8260C	7-3-19	7-3-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-3-19	7-3-19	
o-Xylene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Styrene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromoform	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Bromobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
Naphthalene	ND	1.0	EPA 8260C	7-3-19	7-3-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-3-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0703W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.92**	**8.92**	10.0	10.0	89	89	63-130	0	17	
Benzene	**9.08**	**8.99**	10.0	10.0	91	90	76-125	1	19	
Trichloroethene	**10.5**	**10.2**	10.0	10.0	105	102	76-121	3	18	
Toluene	**9.58**	**9.49**	10.0	10.0	96	95	80-124	1	18	
Chlorobenzene	**10.0**	**9.89**	10.0	10.0	100	99	75-120	1	19	
Surrogate:										
Dibromofluoromethane					*103*	*103*	*75-127*			
Toluene-d8					*101*	*101*	*80-127*			
4-Bromofluorobenzene					*101*	*101*	*78-125*			

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Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*27 - 106*				
Pyrene-d10	*85*	*35 - 98*				
Terphenyl-d14	*86*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*27 - 106*				
Pyrene-d10	*76*	*35 - 98*				
Terphenyl-d14	*81*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Naphthalene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
2-Methylnaphthalene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
1-Methylnaphthalene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthylene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Fluorene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Phenanthrene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Anthracene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Fluoranthene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Pyrene	**ND**	0.099	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]anthracene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Chrysene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[b]fluoranthene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo(j,k)fluoranthene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]pyrene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Dibenz[a,h]anthracene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[g,h,i]perylene	**ND**	0.0099	EPA 8270D/SIM	7-2-19	7-2-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*53*	*27 - 106*				
Pyrene-d10	*67*	*35 - 98*				
Terphenyl-d14	*76*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Naphthalene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
2-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
1-Methylnaphthalene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthylene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Fluorene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Phenanthrene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Anthracene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Fluoranthene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Pyrene	**ND**	0.11	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	7-2-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*63*	*27 - 106*				
Pyrene-d10	*71*	*35 - 98*				
Terphenyl-d14	*72*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*27 - 106*				
Pyrene-d10	*74*	*35 - 98*				
Terphenyl-d14	*78*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*27 - 106*				
Pyrene-d10	*73*	*35 - 98*				
Terphenyl-d14	*81*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-3-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*54*	*27 - 106*				
Pyrene-d10	*69*	*35 - 98*				
Terphenyl-d14	*71*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0702W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluorene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Anthracene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Pyrene	**ND**	0.10	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	7-2-19	7-2-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*27 - 106*				
Pyrene-d10	*78*	*35 - 98*				
Terphenyl-d14	*95*	*41 - 129*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0702W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.279**	**0.280**	0.500	0.500	56	56	36 - 99	0	40	
Acenaphthylene	**0.324**	**0.305**	0.500	0.500	65	61	45 - 113	6	32	
Acenaphthene	**0.357**	**0.331**	0.500	0.500	71	66	43 - 119	8	33	
Fluorene	**0.367**	**0.336**	0.500	0.500	73	67	48 - 114	9	30	
Phenanthrene	**0.384**	**0.352**	0.500	0.500	77	70	49 - 113	9	24	
Anthracene	**0.372**	**0.340**	0.500	0.500	74	68	50 - 113	9	25	
Fluoranthene	**0.416**	**0.387**	0.500	0.500	83	77	57 - 118	7	22	
Pyrene	**0.497**	**0.444**	0.500	0.500	99	89	56 - 128	11	32	
Benzo[a]anthracene	**0.474**	**0.435**	0.500	0.500	95	87	59 - 127	9	24	
Chrysene	**0.431**	**0.385**	0.500	0.500	86	77	57 - 122	11	24	
Benzo[b]fluoranthene	**0.455**	**0.421**	0.500	0.500	91	84	58 - 123	8	26	
Benzo(j,k)fluoranthene	**0.450**	**0.407**	0.500	0.500	90	81	60 - 123	10	22	
Benzo[a]pyrene	**0.432**	**0.395**	0.500	0.500	86	79	54 - 121	9	24	
Indeno(1,2,3-c,d)pyrene	**0.475**	**0.447**	0.500	0.500	95	89	55 - 125	6	26	
Dibenz[a,h]anthracene	**0.463**	**0.424**	0.500	0.500	93	85	57 - 127	9	25	
Benzo[g,h,i]perylene	**0.462**	**0.425**	0.500	0.500	92	85	54 - 122	8	25	
Surrogate:										
2-Fluorobiphenyl					*57*	*60*	*27 - 106*			
Pyrene-d10					*78*	*68*	*35 - 98*			
Terphenyl-d14					*99*	*86*	*41 - 129*			

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*109*	*50-153*				
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*103*	*50-153*				
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*101*	*50-153*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Aroclor 1016	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.052	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*102*	*50-153*				
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*103*	*50-153*				
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Aroclor 1016	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.054	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*99*	*50-153*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-10-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*102*	*50-153*				

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0709W1					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-9-19	7-9-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*104*	*50-153*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0709W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.509**	**0.500**	0.500	0.500	N/A	**102**	**100**	78-129	2	12	
Surrogate:											
DCB						*104*	*103*	*50-153*			

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Arsenic	**3.4**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Arsenic	**5.7**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0710WM1					
Arsenic	**ND**	3.3	EPA 200.8	7-10-19	7-10-19	
Cadmium	**ND**	4.4	EPA 200.8	7-10-19	7-10-19	
Chromium	**ND**	11	EPA 200.8	7-10-19	7-10-19	
Lead	**ND**	1.1	EPA 200.8	7-10-19	7-10-19	
Laboratory ID:	MB0708W1					
Mercury	**ND**	0.50	EPA 7470A	7-8-19	7-8-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-018-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	07-018-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-018-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**116**	**118**	111	111	ND	**105**	**107**	75-125	2	20	
Cadmium	**110**	**109**	111	111	ND	**99**	**99**	75-125	0	20	
Chromium	**109**	**111**	111	111	ND	**98**	**100**	75-125	2	20	
Lead	**114**	**114**	111	111	ND	**103**	**103**	75-125	0	20	
Laboratory ID:	07-018-01										
Mercury	**12.1**	**12.2**	12.5	12.5	ND	**96**	**97**	75-125	1	20	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Arsenic	**3.5**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	

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Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Mercury	**ND**	0.50	EPA 7470A		7-8-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	07-018-01					
Arsenic	**ND**	3.0	EPA 200.8		7-8-19	
Cadmium	**ND**	4.0	EPA 200.8		7-8-19	
Chromium	**ND**	10	EPA 200.8		7-8-19	
Lead	**ND**	1.0	EPA 200.8		7-8-19	
Laboratory ID:	07-018-01					
Mercury	**ND**	0.50	EPA 7470A		7-8-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-018-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	07-018-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-018-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**84.0**	**83.4**	80.0	80.0	ND	**105**	**104**	75-125	1	20	
Cadmium	**76.4**	**75.2**	80.0	80.0	ND	**96**	**94**	75-125	2	20	
Chromium	**74.2**	**74.6**	80.0	80.0	ND	**93**	**93**	75-125	1	20	
Lead	**77.4**	**77.0**	80.0	80.0	ND	**97**	**96**	75-125	1	20	
Laboratory ID:	07-018-01										
Mercury	**12.0**	**12.0**	12.5	12.5	ND	**96**	**96**	75-125	0	20	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	07-018-01					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-2**					
Laboratory ID:	07-018-02					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-3**					
Laboratory ID:	07-018-03					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-4**					
Laboratory ID:	07-018-04					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-5**					
Laboratory ID:	07-018-05					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-6**					
Laboratory ID:	07-018-06					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	
Client ID:	**MW-7**					
Laboratory ID:	07-018-07					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	

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Date of Report: July 11, 2019
Samples Submitted: July 2, 2019
Laboratory Reference: 1907-018
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0702W2					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	7-2-19	7-2-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-018-01										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-018-01										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**92.0**	**96.2**	100	100	ND	92	96	75-125	4	20	
SPIKE BLANK											
Laboratory ID:	SB0702W2										
	SB		SB			SB					
Hexavalent Chromium	**90.9**		100		NA	91		85-115	NA	NA	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National Auto
Project Manager: Dylan Galloway
Sampled by: Dylan Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 07-018

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved MTCA	Hexavalent Chromium			% Moisture
1	mw-1	7/1/19	1130	W	14	X				X				X	X					X			X	X			
2	mw-2		1300			X				X				X	X					X			X	X			
3	mw-3		1850			X				X				X	X					X			X	X			
4	mw-4		1415			X				X				X	X					X			X	X			
5	mw-5		1755			X				X				X	X					X			X	X			
6	mw-6		1630			X				X				X	X					X			X	X			
7	mw-7		1525			X				X				X	X					X			X	X			

	Signature	Company	Date	Time
Relinquished		GEI	7/2/19	0750
Received		OSE	7/2/19	0750
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

2,2,0,4

GALLOWAY ENVIRONMENTAL, INC
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008
Dylan@GallowayEnvironmental.com

November 13, 2019

Sunset Chevrolet, Inc.
Mitchell Development
Attn: Ms. Cristi Acuna
910 Traffic Avenue
Sumner, WA 98390

E-mailed to: CristiAcuna@SunsetChev.com

SUBJECT: GROUNDWATER MONITORING REPORT FOR THE NATIONAL AUTO PARTS PROPERTY AT 16008 60TH STREET EAST, SUMNER, WASHINGTON 98390; WASHINGTON STATE DEPARTMENT OF ECOLOGY SITE ID #1304, CLEANUP SITE #3653, VCP PROJECT #SW1547

Dear Ms. Acuna:

This letter report presents Galloway Environmental, Inc.'s (GEI's) findings from recent sampling of seven groundwater monitoring wells at the National Auto Parts property, located at 16008 60th Street East in Sumner, Washington, hereafter referred to as "*the Site*." The Washington State Department of Ecology (Ecology) Site Identification (ID) for the Site is #1304. Ecology's Cleanup Site ID for the Site is #3653. Ecology's Voluntary Cleanup Program (VCP) Project ID for the Site is SW1547.

The Site is situated immediately southeast of the intersection of 60th Street East and 160th Avenue East. It is approximately 0.4 miles north of State Route (SR) 410 and 1.7 miles east of SR 167 in an area of residential and commercial properties (see Attachment 1, Figure 1). Pierce County lists the Site to be associated with parcel number 0520198006 with the taxpayer noted as "Phil's Speed Shop, LLC." The parcel consists of approximately 1.58 acres of land and includes a 9,300 square foot (sf) storage/warehouse.

This work was conducted as a continuance to an independent remedial action undertaken by GEI for Mr. Phil Mitchell with the primary goal to evaluate groundwater conditions upgradient and downgradient of the former source area of contamination to confirm the effectiveness of the Independent Remedial Action at the Site.

BACKGROUND

Sumner National Auto Parts operated a retail auto parts supply store with an "out of vehicle" engine rebuild and metal machine shop since the facility was constructed in 1979 until its recent closure. The machine shop area occupied approximately 4,500 sf and the retail sales and storage area occupied approximately 3,000 sf.

Reportedly, an unknown amount of spent parts cleaning solutions (volatile organic compounds [VOCs]) and caustic spray were released to a concrete slab and soils along the eastern side of the building near the structure's exterior door. Ecology responded to a citizen complaint regarding the spill and determined that the Site was impacted by total petroleum hydrocarbons, metals, and parts-cleaning solvents.

The owner contracted EnCo Environmental Company (EnCo) to conduct several environmental studies and develop an Environmental Cleanup Plan for the Site. Based on laboratory analyses of soil and groundwater samples collected during the environmental studies, EnCo developed an *Independent Remedial Cleanup Action Work Plan*, dated May 23, 2017, hereafter referred to as the "*Work Plan*." A copy of the Work Plan is kept in the Central files of Ecology's Southwest Regional Office (SWRO).

In its Opinion Letter, dated July 12, 2017, Ecology concurred with the remedial action and feasibility study described in the Work Plan. This generally included the "excavation of contaminated soils and installation of six additional groundwater monitoring wells. Fieldwork for the excavation and well installation work was authorized via email from Ecology to EnCo on June 27, 2017.

Between October 2017 and January 2018, a remedial excavation was conducted at the Site in general accordance with the Work Plan. The remedial excavation generally included the removal of 262.92 tons of

impacted soils. The excavated soil was transported for disposal at the LRI Landfill, located at 17925 Meridian Street East in Puyallup, Washington under the Waste Disposal Authorization (WDA) number 2188. During the excavation work, GEI collected soil samples for laboratory analyses to document the effectiveness of the removals (performance samples) and to document the remaining concentrations of contaminants of concern (COCs) from the final limits of excavation (confirmation samples). Based on laboratory analytical results of the confirmation soil samples collected from the final limits of excavation, all known soils COCs have been removed from the Site.

Between August 13, 2018 and August 14, 2018, GEI monitored the installation of six groundwater monitoring wells at the Site, as noted in the Work Plan and Ecology's Opinion Letter, dated July 12, 2017. One pre-existing well (MW-1), situated in the central region of the Site, was installed on October 30, 2015 by others. The six additional wells (MW-2 through MW-7) were subsequently installed in general accordance with the Work Plan. The installation included one cross/downgradient well west of the remedial excavation area (MW-2), two downgradient wells north of the remedial excavation area (MW-3 and MW-4), two cross/upgradient wells east of the remedial excavation area (MW-5 and MW-6), and one upgradient well south of the remedial excavation area (MW-7). The groundwater monitoring well locations are depicted in Figure 2 of this report.

During drilling activities for MW-2 through MW-7, GEI field-screened soil for indications of impacts (e.g., odors, staining, elevated photoionization detector [PID]) readings. GEI also collected soil samples from each borehole for analyses of petroleum hydrocarbons, VOCs, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total metals. At each sample point, the driller advanced an 18-inch long split spoon sampling device which was advanced by repeatedly dropping a 140-pound drop hammer onto the sampling device. Upon reaching the terminal depths of each sample point, the sample device was extracted from the borehole and the accompanying soil sample was retained and field screened. Soil samples collected for laboratory analysis were placed directly into new laboratory-supplied containers.

In accordance with the Work Plan and Ecology's Opinion Letter, dated July 12, 2017, GEI submitted the soil samples to a Washington State Certified laboratory (OnSite Environmental, located at 14648 NE 95th Street in Redmond, Washington) to test for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbons as Hydrocarbon Identification (NWTPH-HCID), VOCs, PAHs, PCBs, and metals (arsenic, barium, cadmium, chromium, and lead).

Laboratory analyses of all soil samples resulted in either non-detectable concentrations or detected concentrations at levels below their respective action levels.

Chemical Analysis of Groundwater Samples

As noted above, GEI submitted the samples to OnSite Environmental to test for petroleum hydrocarbon identification using the NWTPH-HCID Method, VOCs using the USEPA Method 8260C, PAHs using the USEPA Method 8270D/SIM, PCBs using the USEPA Method 8082A, Total and Dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the USEPA Method 200.8/7470A, and hexavalent chromium using the USEPA Method SM3500-Cr B.

Sample Handling, Storage, and Shipment

The samples were packaged properly according to the current DOT requirements. Ice was added to ensure that the samples were kept at approximately 4˚C. The samples were kept chilled between the time of the sampling and the time of the analytical processing.

The samples were hand-delivered to the analytical laboratory within 24 hours of their collection date under proper chain-of-custody protocols. A field logbook documented the field activities, observations, and other relevant information regarding the sampling.

Equipment Decontamination

The samples were collected at each sample location using procedures designed to minimize the risk of cross contamination of the samples. All sampling equipment that could come into direct contact with sample media was decontaminated before starting work and between each sampling location. The following procedure was used for cleaning all sampling equipment:

- Remove gross contamination by brushing/wiping and rinsing with potable water.
- Wash and scrub with laboratory grade detergent (i.e., Aquinox®).
- Rinse with distilled water.
- Air dried.

Quarterly Groundwater Monitoring Quarter 1 – August 31, 2018

On August 31, 2018, GEI conducted the first quarterly groundwater monitoring for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons using the NWTPH-HCID Method, VOCs using the United States Environmental Protection Agency (USEPA) Method 8260C, PAHs using the USEPA Method 8270D/SIM, PCBs using the USEPA Method 8082A, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead) using the USEPA Method 200.8/7470A, and hexavalent chromium using the USEPA Method SM 3500-CR B.

Laboratory analyses resulted in the detections of dissolved arsenic in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 9.0 micrograms per liter (μg/L), 5.4 μg/L, and 5.9 μg/L, respectively and slightly exceeding the Model Toxics Control Act (MTCA) Method A Cleanup Level of 5.0 μg/L. Total arsenic was detected in the groundwater samples collected from MW-3, MW-5, and MW-7 at concentrations of 12.0 μg/L, 5.8 μg/L, and 6.4 μg/L, respectively. The presence of turbidity in groundwater samples generally leads to higher concentrations of total metals because suspended soil particles consist of minerals. Therefore, the elevated concentrations of total arsenic, as compared to dissolved arsenic, are likely the result of introduction by turbidity in the water samples. One VOC (p-isopropyltoluene) was detected in the groundwater sample collected from MW-3 at a concentration of 0.62 μg/L. As of the date of this report, there is no cleanup level for this VOC. Laboratory analyses did not result in the detection of any other analyte at concentrations equal to or exceeding their respective laboratory practical quantitation limits (PQLs).

Quarterly Groundwater Monitoring Quarter 2 – December 20, 2018

On December 20, 2018, GEI conducted the second quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbon identification with follow-up to detected analyte(s) and dissolved MTCA 5 Metals (arsenic, cadmium, chromium, lead, and mercury) using the analytical methods described in the groundwater monitoring event summary for quarter 1. Petroleum constituents (benzene, toluene, ethylbenzene, and xylenes), PAHs, PCBs, and hexavalent chromium were eliminated from the analyte list during this sampling event since they were not detected during the groundwater monitoring event in August 2018.

Laboratory analyses resulted in the detection of TPH-Diesel in the groundwater sample collected from MW-4 at a concentration of 0.27 milligrams per liter (mg/L), below its MTCA Method A Cleanup Level of 0.5 mg/L. Dissolved arsenic was detected in the groundwater sample collected from MW-7 at a concentration of 3.2 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L. Laboratory analyses did not result in the detection of any other analyte at concentrations equal to or exceeding their respective laboratory PQLs.

Quarterly Groundwater Monitoring Quarter 3 – March 26, 2019

On March 26, 2019, GEI conducted the third quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium using the analytical methods described in the groundwater monitoring event summary for quarter 1.

Laboratory analyses resulted in the detection of one PAH (i.e., naphthalene) in the groundwater sample collected from MW-7 at a concentration of 0.55 μg/L, below its MTCA Method A Cleanup Level of 160 μg/L. Total arsenic was detected in the groundwater sample collected from MW-6 at a concentration of 3.5 μg/L, below its MTCA Method A Cleanup Level of 5.0 μg/L. It should be noted that, due to sample interference, the laboratory elevated the PQL for hexavalent chromium to 50 μg/L, exceeding its MTCA Method B Cleanup Level of 48 μg/L. However, laboratory analyses of the samples for total and dissolved chromium resulted in no detectable concentrations equal to or above their PQLs of 11 μg/L and 10 μg/L, respectively. Therefore, the elevated PQL for hexavalent chromium is not considered significant for this groundwater monitoring event. Laboratory analyses did not result in the detection of any other analyte at concentrations equal to or exceeding their respective laboratory PQLs.

Quarterly Groundwater Monitoring Quarter 4 – July 1, 2019

On July 1, 2019, GEI conducted the fourth quarterly monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium using the analytical methods described in the groundwater monitoring event summary for quarter one.

Laboratory analyses resulted in the detections of total and dissolved arsenic in the groundwater sample collected from MW-3 at concentration of 3.4 μg/L and 3.5 μg/L, respectively. Both concentrations were below its MTCA Method A Cleanup Level of 5.0 μg/L. Total arsenic was also detected in the groundwater sample collected from MW-6 at concentration of 5.7 μg/L, slightly exceeding its MTCA Method A Cleanup Level of 5.0 μg/L. However, dissolved arsenic was not detected at a concentration equal to, or exceeding its laboratory PQL in the dissolved (field filtered) groundwater sample collected from the same groundwater well. As noted in the summary for the August 2018 monitoring event, the elevated concentration of total arsenic is likely a result of turbidity in the sample. Laboratory analyses did not result in the detection of any other analyte at concentrations equal to or exceeding their respective laboratory PQLs.

GROUNDWATER MONITORING QUARTER 5 – OCTOBER 22, 2019

On October 22, 2019, GEI conducted the fifth quarterly groundwater monitoring event for the site. The samples were submitted to OnSite Environmental to test for petroleum hydrocarbons, VOCs, PAHs, PCBs, dissolved and total metals (arsenic, barium, cadmium, chromium, and lead), and hexavalent chromium using the analytical methods described in the groundwater monitoring event summary for quarter one. As with the previous monitoring events, prior to sample collection, GEI gauged and purged each well to determine the depths to groundwater, confirm stabilized groundwater conditions, and attain representative groundwater samples. The purging and sampling methods included the use of a low-flow peristaltic pump and dedicated tubing which directed the samples into new laboratory supplied containers. During the purging process, water quality parameters were measured using a multiparameter water quality meter (model YSI 556 MPS) fitted with a flow-through cell to measure pH, temperature, conductivity, and dissolved oxygen (DO). The meter was calibrated prior to use using a 3-point pH calibration process (pH valued at 4.02, 7.02, and 10.04) and a 3-point conductivity process (conductivity valued at 84 micrograms per centimeter [μg/cm], 1,413 μg/cm, and 12,880 μg/cm).

GEI purged water from each well prior to sample collection until confirmation of attaining stabilized water quality parameters, including pH within 0.1 standard unit (SU), conductivity within 5-percent (%), and temperature within 0.1 degrees Celsius (˚C) for at least three consecutive readings. The pH measured at the conclusion of the purging process for all wells ranged from 5.30 (MW-5) to 6.82 (MW-2). The conductivity measured at the conclusion of the purging process for all wells ranged from 0.417 milliSiemens per centimeter (mS/cm) (MW-6) to 0.927 mS/cm (MW-2). The DO measured at the conclusion of the purging process for all wells ranged from 0.24 mg/L (MW-3) to 2.36 mg/L (MW-5). Turbidity was observed to be clear in all wells at the conclusion of the purging process.

GEI utilized the USEPA On-Line Tools for Site Assessment Calculation to calculate the hydraulic gradient and direction for all groundwater monitoring events. Based on groundwater elevations that were collected during each groundwater monitoring event, the average groundwater flow direction is generally to the northwest at a bearing of 305 degrees from north. The table below presents the historic groundwater elevations and calculated bearing.

Sample Date	Groundwater Well – Water Elevation							Bearing (degrees from north)
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	
Aug 2018	70.79	70.57	70.69	70.72	70.83	70.82	70.95	325
Dec 2018	72.99	72.82	72.92	73.02	73.16	73.1	73.09	286
Mar 2019	72.52	72.39	72.45	72.56	72.55	72.85	72.65	314
July 2019	71.64	71.48	71.53	71.6	71.7	71.7	71.79	326
Oct 2019	71.92	71.71	71.85	72.1	72.35	72.39	72.1	275

Groundwater Sample Analytical Results

Laboratory analyses of all groundwater samples are discussed below and presented in Table 1 (Attachment 2). The laboratory analytical report is attached as Appendix B to this report.

Petroleum Hydrocarbons

Laboratory analysis resulted in no detections of petroleum hydrocarbons at concentrations equal to or exceeding their respective laboratory PQLs.

Volatile Organic Compounds

Laboratory analysis resulted in no detections of VOCs at concentrations equal to or exceeding their respective laboratory PQLs.

Polycyclic Aromatic Hydrocarbons

Laboratory analysis resulted in no detections of PAHs at concentrations equal to or exceeding their respective laboratory PQLs.

Polychlorinated Biphenyls

Laboratory analysis resulted in no detections of PCBs at concentrations equal to or exceeding their respective laboratory PQLs.

Total Metals

Laboratory analysis resulted in no detections of total metals (i.e., arsenic, cadmium, chromium, lead, and mercury) at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Metals

Groundwater samples collected for dissolved metals analysis were field filtered using new dedicated inline 0.45 micron (μm) filters. Laboratory analysis resulted in no detections of dissolved metals (i.e., arsenic, cadmium, chromium, lead, and mercury) at concentrations equal to or exceeding their respective laboratory PQLs.

Dissolved Hexavalent Chromium

Laboratory analysis resulted in no detections of dissolved hexavalent chromium at concentrations equal to or exceeding its respective laboratory PQLs. It should be noted that, due to sample interference, the laboratory elevated the PQL for hexavalent chromium to 50 μg/L, exceeding its MTCA Method B Cleanup Level of 48 μg/L. However, laboratory analyses of the samples for total and dissolved chromium resulted in no detectable concentrations equal to or above their PQLs of 11 μg/L and 10 μg/L, respectively. Therefore, the elevated PQL for hexavalent chromium is not considered significant for this groundwater monitoring event.

TERRESTRIAL ECOLOGICAL EVALUATION

GEI completed a simplified terrestrial ecological evaluation (TEE) as part of the final evaluation of the site conditions following the final groundwater monitoring event in general accordance with WAC 173-340-7492. The simplified TEE approach was selected on the basis that the site was found to not have a substantial potential for posing a threat of significant adverse effects to terrestrial ecological receptors since 1) all known soil contamination has been removed from the site, 2) subsequent groundwater sampling and analysis confirmed that the contamination is absent at the site, 3) planned redevelopment of the area includes construction of pavement throughout the area of historic contamination.

PATHWAY ANALYSIS

The most recent land use at the site has included retail automotive parts sales. The planned future land use at the site includes the construction of pavement throughout the area of historic contamination and use of the on-site structure for storage of vehicles. Surrounding land use generally includes residential and commercial properties.

Based on the planned future redevelopment of the site, the current land use of surrounding properties, and the absence of contamination, the potential for an exposure pathway of contaminants to ecological receptors is considered incomplete.

CONTAMINANT ANALYSIS

No hazardous substances are present in soil at concentrations equal to or exceeding their compliance levels listed in MTCA Tables 749-1 or 749-2 (WAC 173-340-900, Tables 749-1 and 749-2). Therefore, based on this analysis, the potential for an exposure pathway of contaminants to ecological receptors is considered incomplete. The TEE checklist form is included as Attachment 3 of this report.

CONCLUSIONS AND RECOMMENDATIONS

Based on laboratory analyses, the site groundwater that was analyzed during this monitoring event were confirmed to have either non-detectable concentrations of contaminants of concern or detected concentrations at levels below their respective cleanup levels.

As noted in the report for the July 2019 monitoring event, total arsenic was detected in the groundwater sample that was collected from MW-6 at a concentration slightly exceeding its cleanup level. However, laboratory analysis of the dissolved groundwater sample that was collected from the same groundwater monitoring well resulted in a non-detectable concentration for arsenic. As noted above, the presence of turbidity in groundwater samples generally leads to higher concentrations of total metals because suspended soil particles consist of minerals. Therefore, the elevated concentrations of total arsenic, as compared to dissolved arsenic, are likely the result of introduction by turbidity in the water samples.

This is the fourth consecutive quarterly groundwater monitoring event that has confirmed residual concentrations of contaminants of concern (i.e., total petroleum hydrocarbons, VOCs, PAHs, PCBs, and dissolved metals) are below their respective MTCA Cleanup Levels. Therefore, GEI recommends the following:

1. Discontinuing monitoring of the site groundwater;
2. Preparing an Independent Remedial Action report for submittal to Ecology;
3. Uploading all electronic data to Ecology's Environmental Information Management (EIM) database,
4. Requesting a No Further Action (NFA) from Ecology; and
5. Upon receipt of a NFA determination, GEI further recommends properly decommissioning the groundwater monitoring wells.

Should you have any questions regarding this report or if you would like to discuss our findings, please contact me at the addresses listed at the top of this letter.

Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Dylan Galloway, REA
President

Frederick H. Becker, LEG, LHG
Senior Geologist

State of Washington
Hydrogeologist
388
Licensed Geologist
FREDERICK H. BECKER

ATTACHMENT 1

FIGURES

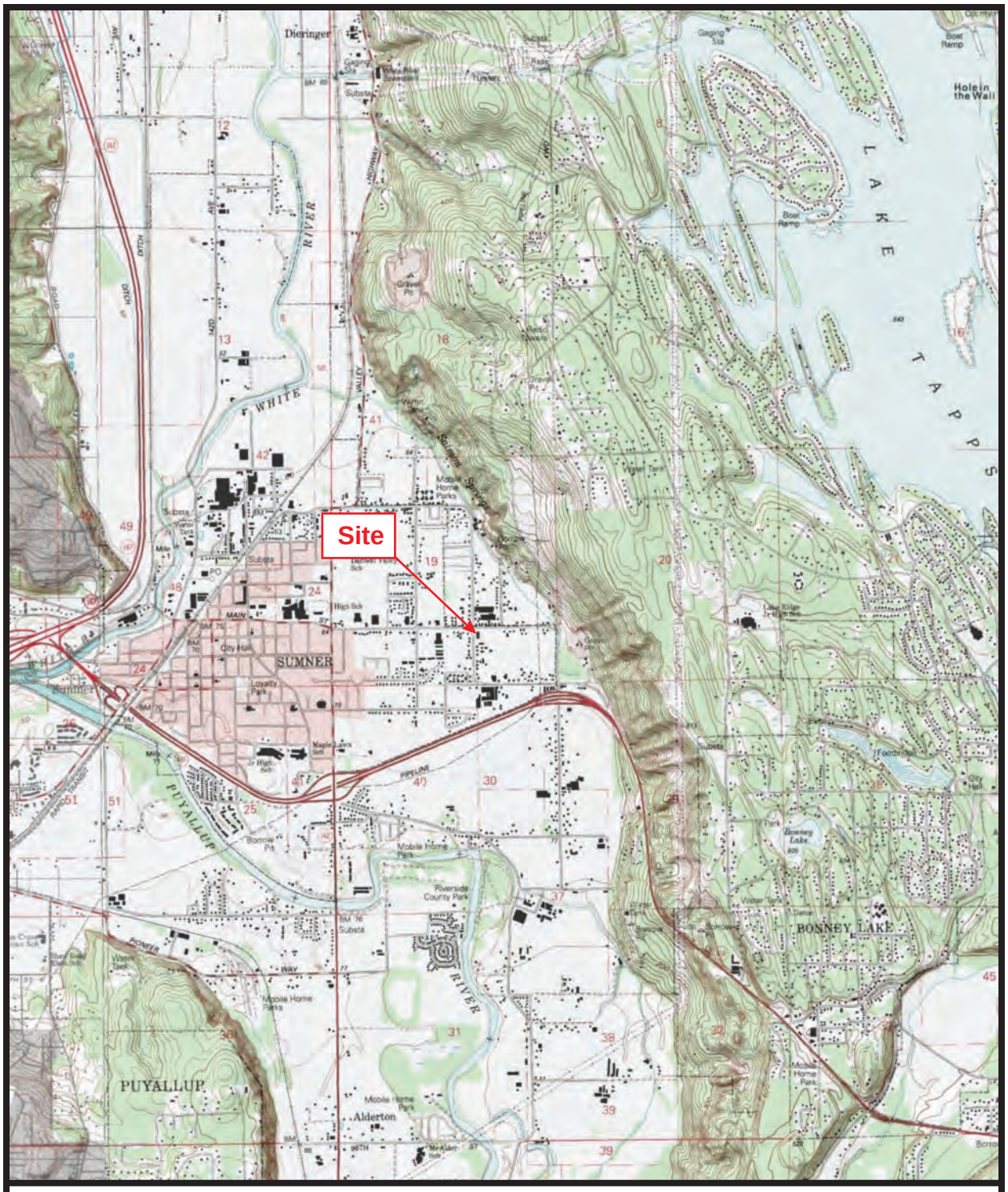

FIGURE 1 — SITE LOCATION MAP

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: MyTopo.com, GEI Project # 37018

N

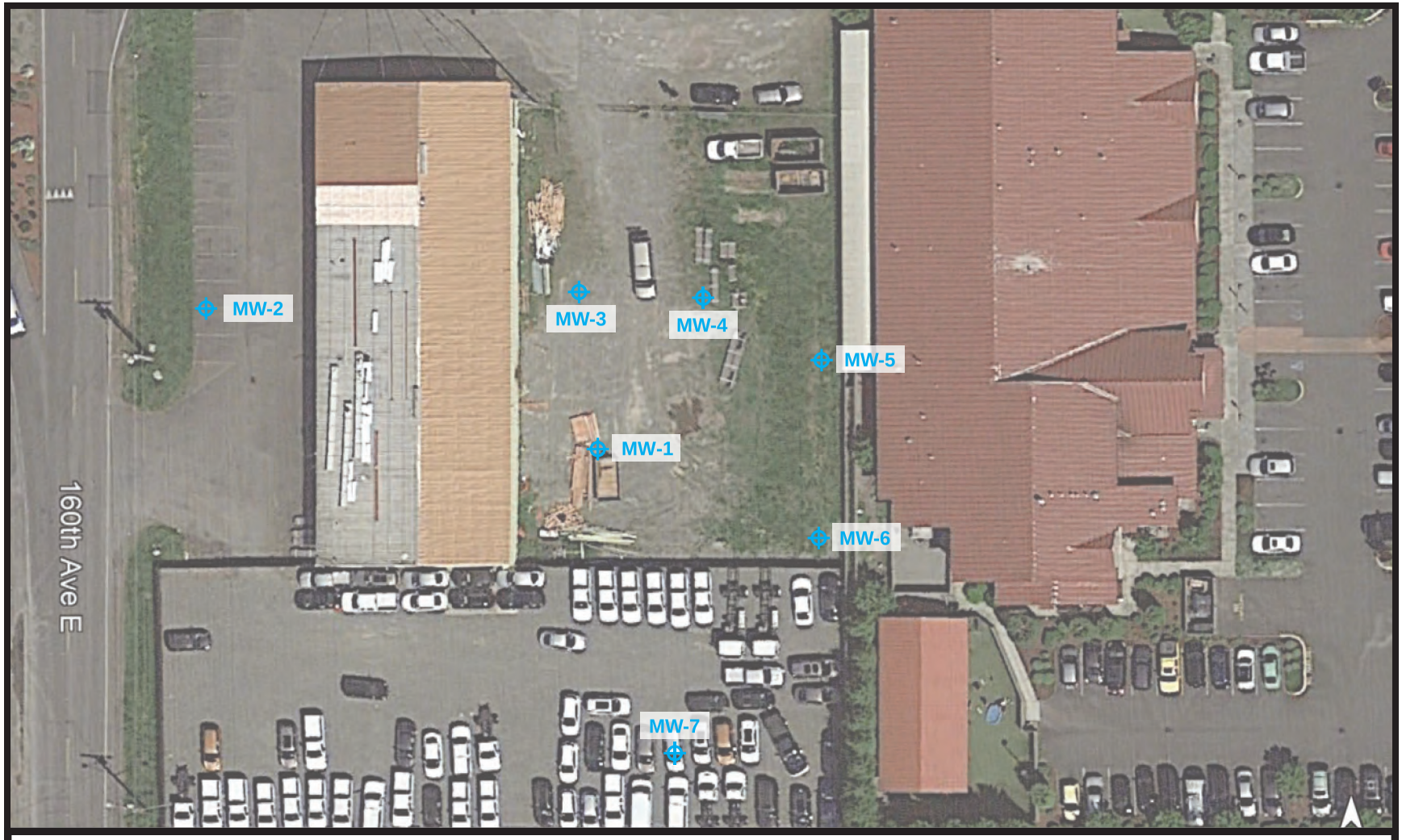

FIGURE 2 — GROUNDWATER MONITORING WELL MAP
Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project # 37018

N

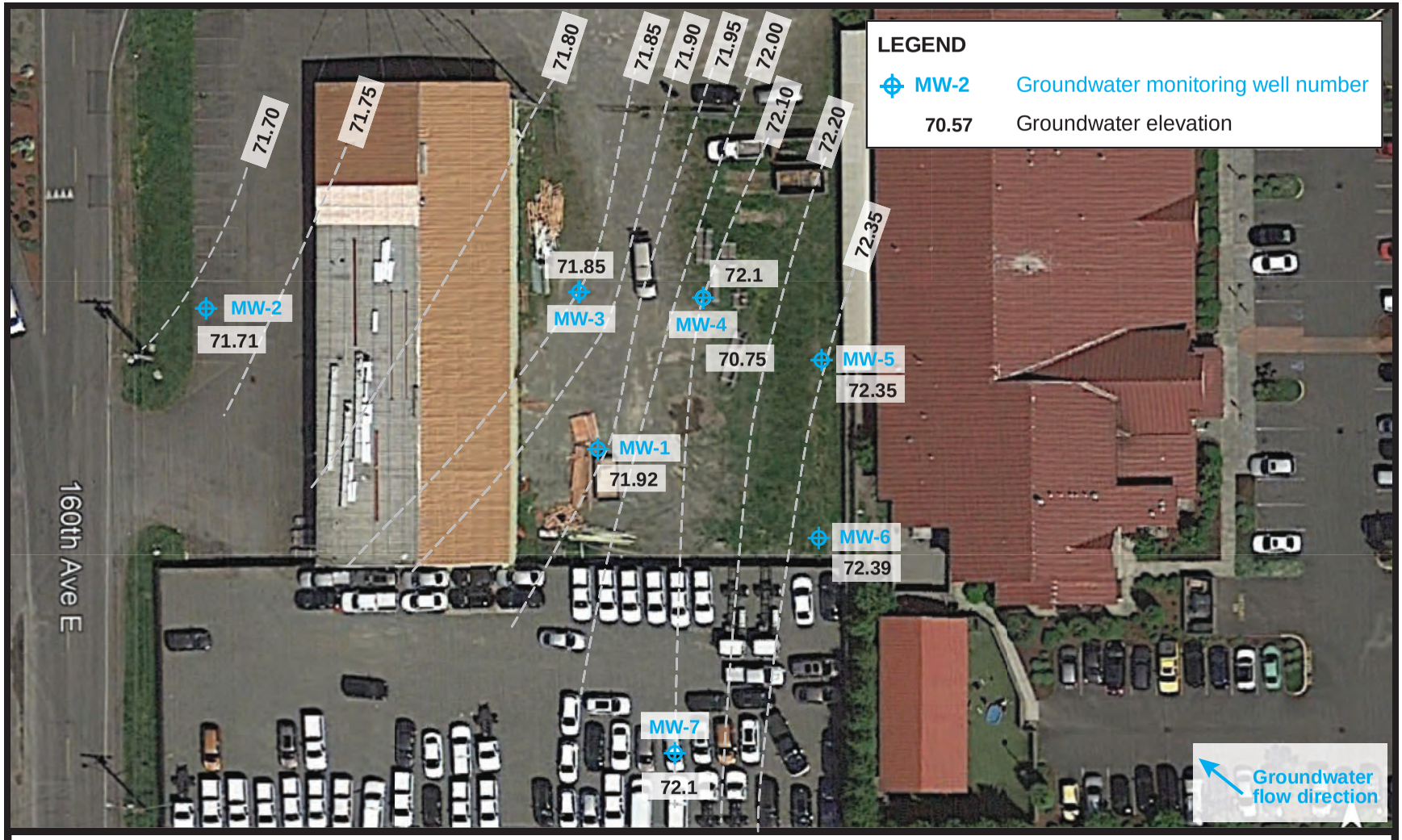

FIGURE —GROUNDWATER GRADIENT O TO ER 2

Groundwater Monitoring - Former National Auto Parts
16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project # 37018

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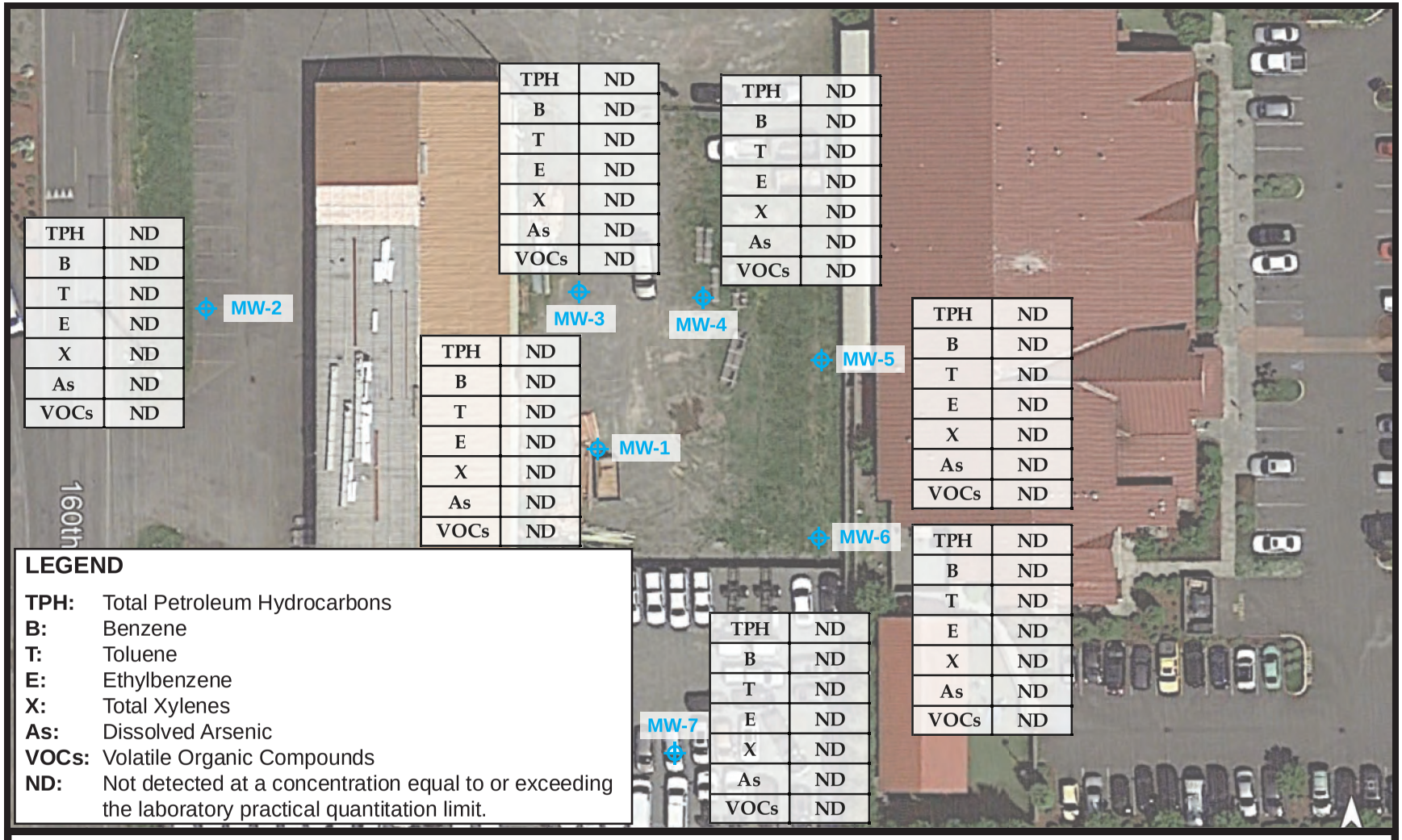

FIGURE 4—GROUNDWATER MONITORING SELECT ANALYTICAL DATA, OCTOBER 2019

Groundwater Monitoring - Former National Auto Parts

16008 60th Street E., Sumner, WA

Source: Google Earth, May, 2018, GEI Project # 37018

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ATTACHMENT 2

ANALYTICAL TABLES

Table 1
Select Laboratory
Analytical Results
for Groundwater Samples
National Auto Parts
August 2018 through October 2019
GEI Project #37018

Sample Number	Date of Sample	Analyte																							
		Total Petroleum Hydrocarbons (mg/L)			Fuel Constituents (µg/L)				VOCs[1] (µg/L)	Polycyclic Aromatic Hydrocarbons (µg/L)			PCBs[2] (µg/L)	Dissolved Metals (µg/L)						Hexavalent Chromium (µg/L)	Total Metals (µg/L)					
		Gasoline	Diesel	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes		Phenanthrene	Fluoranthene	Pyrene		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury
MW-1	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	ND <25	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	ND <28	ND <4.4	ND <11	ND <1.1	--
	12/20/2018	ND <0.10	ND <0.26	ND <0.41	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-2	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	39	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	59	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-3	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	0.62*	ND <0.095	ND <0.095	ND <0.095	ND <0.047	**9.0**	37	ND <4.0	ND <10	ND <1.0	--	ND <10	**12.0**	69	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.099	ND <0.099	ND <0.099	ND <0.050	3.5	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	3.4	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-4	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.096	ND <0.096	ND <0.096	ND <0.047	ND <3.0	40	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	63	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	0.27	ND <0.40	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.052	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-5	8/31/2018	ND <0.10	ND <0.25	ND <0.40	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.047	**5.4**	43	ND <4.0	ND <10	ND <1.0	--	ND <10	**5.8**	50	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.099	ND <0.099	ND <0.099	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-6	8/31/2018	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.047	ND <3.0	52	ND <4.0	ND <10	ND <1.0	--	ND <10	ND <3.3	57	ND <4.4	ND <11	ND <1.1	<1.1
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	--	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	3.5	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.054	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	**5.7**	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.094	ND <0.094	ND <0.094	ND <0.047	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MW-7	8/31/2018	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.097	ND <0.097	ND <0.097	ND <0.047	**5.9**	32	ND <4.0	ND <10	ND <1.0	--	ND <10	**6.4**	34	ND <4.0	ND <10	ND <1.0	<1.0
	12/20/2018	ND <0.10	ND <0.25	ND <0.40	--	--	--	--	--	--	--	--	--	3.2	--	ND <4.0	ND <10	ND <1.0	ND <0.50	--	--	--	--	--	--	--
	3/26/2019	ND <0.10	ND <0.26	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.11	ND <0.11	ND <0.11	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	7/1/2019	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.050	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <10	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
	10/22/2019	ND <0.10	ND <0.25	ND <0.41	ND <0.20	ND <1.0	ND <0.20	ND <0.60	ND	ND <0.10	ND <0.10	ND <0.10	ND <0.048	ND <3.0	--	ND <4.0	ND <10	ND <1.0	ND <0.50	ND <50	ND <3.3	--	ND <4.4	ND <11	ND <1.1	ND <0.50
MTCA Cleanup Level		**0.8/1.0[a]**	**0.5**	**0.5**	**5.0**	**1,000**	**700**	**1,000**	**See Notes**	**NVE**	**NVE**	**480[b]**	**0.1**	**5.0/10[c]**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**	**48**	**5.0**	**3,200[b]**	**5.0**	**50**	**15**	**2.0**

Notes:

1	Volatile organic compounds (VOCs), results in µg/L; Detections defined in Notes
PCBs	Polychlorinated Biphenyls
*	VOC detection was p-isopropyltoluene. There is currently no MTCA Cleanup Level established
mg/L	Milligrams per liter
µg/L	Micrograms per liter
a	Model Toxics Control Act (MTCA) Method A Action Level is 0.8 mg/L with benzene present and 1.0 mg/L without benzene present
b	MTCA Method B Action Level is cited due to no establishment of MTCA Method A Action Level
c	MTCA Method A Action Level is 5.0 µg/L; Ecology's Maximum Contaminant Level is 10 mg/L
ND<	Not detected. The value after the '<' is the laboratory practical quantitation limit (PQL)
9.0	Bold and shaded gray result indicates exceedance of MTCA Action Level
NVE	No Value Established
--	Not analyzed

ATTACHMENT 3

TEE CHECKLIST

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

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

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

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

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

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Sumner National Auto Parts	
Facility/Site Address: 16008 60th Street East, Sumner, Pierce County, WA 98390	
Facility/Site No: 1304	VCP Project No.: SW1547

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Dylan Galloway		Title: President	
Organization: Galloway Environmental, Inc.			
Mailing address: 15600 NE 8th Street, Suite B1, 617			
City: Bellevue		State: WA	Zip code: 98008
Phone: (425)894-8607	Fax:	E-mail: dylan@gallowayenvironmental.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

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

☐ Yes *If you answered **"YES,"** then answer **Question 2**.*

☒ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

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

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

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

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

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

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

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

☐ There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

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

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

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

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

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

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☒ No *If you answered **"NO,"** then answer **Question 5** below.*

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

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

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

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

☒ Area of soil contamination at the Site is not more than 350 square feet.

☒ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

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

☒ No potential exposure pathways from soil contamination to ecological receptors.

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

☒ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☒ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☒ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

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

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

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

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

☐ No issues were identified during the problem formulation step.

☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

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

☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*

☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use? *Check all that apply. See* WAC 173-340-7493(3).

☐ Literature surveys.

☐ Soil bioassays.

☐ Wildlife exposure model.

☐ Biomarkers.

☐ Site-specific field studies.

☐ Weight of evidence.

☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

☐ Confirmed there was no problem.

☐ Confirmed there was a problem and established site-specific cleanup levels.

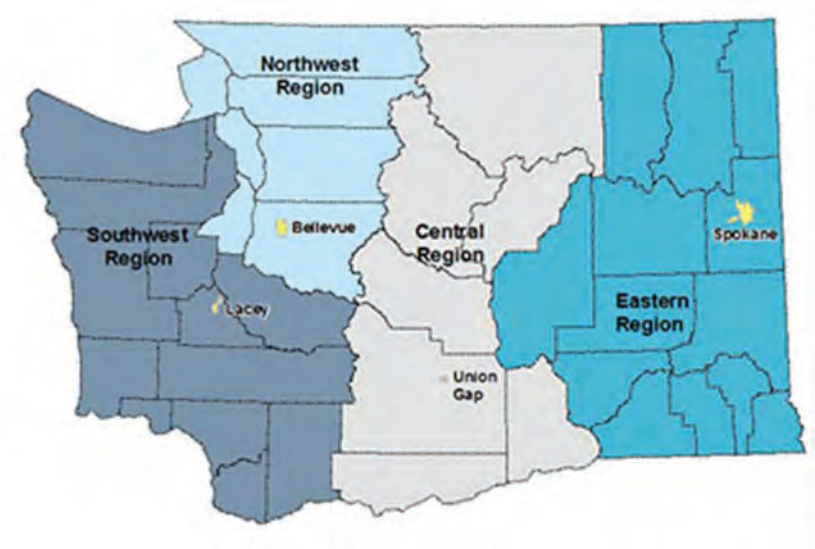
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

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



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

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

APPENDIX A

FIELD FORMS

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-1 Date & Time Started 10/22/19 1400

Project Location: 16008 60th St East Well Location & diameter SE of Bldg 1"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.28 Depth to well bottom 8.25

Water column in well 3.97 Gallons per foot 0.077 Gallons in well 0.306 (x3: 0.92)

Purging method Peristaltic Pump Volume purged 2.25 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements) pH → measured w/YSI → measured w/SDL 100
1410	14.14	5.73/6.36	0.580	clr	1.01	clr	0.25 gal total ORP: 44 mV
1415	14.12	5.73/6.36	0.577	clr	0.70	clr	0.75 gallon total ORP: 45 mV
1420	14.10	5.72/6.35	0.575	clr	0.52	clr	1.25 gallons total ORP: 45 mV
1425	14.11	5.72/6.35	0.576	clr	0.51	clr	1.75 gallons total ORP: 45 mV
1430	14.10	5.72/6.35	0.575	clr	0.50	clr	2.25 gallons total ORP: 45 mV
							1435 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-2 Date & Time Started 10/22/19 1110

Project Location: 16008 60th St East Well Location & diameter West of Bldg ; 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.39 Depth to well bottom 13.80

Water column in well 9.41 Gallons per foot 0.16 Gallons in well 1.5 (x3 = 4.5)

Purging method Peristaltic Pump Volume purged 4.5 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, ~~three~~ 5 40 mL VOAs, ~~Two~~ 3 ½ L Polys (4 - 1L Ambers)

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements)	
1115	15.59	7.31/6.54	0.949	clr	0.96	clr	0.5 gal total	ORP: 34 mV
1120	15.73	7.11/6.53	0.945	clr	0.49	clr	1.0 gal total	ORP: 35 mV
1125	15.78	6.95/6.53	0.939	clr	0.36	clr	1.5 gal total	ORP: 35 mV
1130	15.77	6.84/6.53	0.931	clr	0.31	clr	2.0 gal total	ORP: 35 mV
1135	15.77	6.83/6.53	0.930	clr	0.28	clr	2.5 gal total	ORP: 35 mV
1140	15.78	6.83/6.53	0.929	clr	0.28	clr	3.0 gal total	ORP: 35 mV
1145	15.78	6.82/6.53	0.928	clr	0.28	clr	3.5 gal total	ORP: 35 mV
1150	15.78	6.82/6.53	0.928	clr	0.28	clr	4.0 gal total	ORP: 35 mV
1155	15.77	6.82/6.53	0.927	clr	0.28	clr	4.5 gal total	ORP: 35 mV
							1200 Collect Sample	

pH 7.31/6.54 → measured with SDL 100; → measured with YSI

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-3 Date & Time Started 10/22/19 1740

Project Location: 16008 60th St East Well Location & diameter E of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.75 Depth to well bottom 13.63

Water column in well 8.88 Gallons per foot 0.16 Gallons in well 1.42 (x3: 4.26)

Purging method peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements)
							pH 6.34/6.49 measured @SDC100 measured @MSI
1750	14.03	6.34/6.49	0.691	clr	1.52	clr	1.0 gallon total ORP= 37 mV
1755	14.02	6.26/6.51	0.692	clr	0.53	clr	1.5 gal total ORP= 37 mV
1800	14.01	6.24/6.52	0.692	clr	0.39	clr	2.0 gal total ORP= 37 mV
1805	14.01	6.23/6.52	0.691	clr	0.31	clr	2.5 gal total ORP= 37 mV
1810	14.00	6.22/6.52	0.692	clr	0.25	clr	3.0 gal total ORP= 37 mV
1815	14.00	6.22/6.52	0.692	clr	0.24	clr	3.5 gal total ORP= 37 mV
1820	14.00	6.22/6.52	0.692	clr	0.23	clr	4.0 gal total ORP= 37 mV
1825	14.00	6.22/6.52	0.692	clr	0.24	clr	4.5 gal total ORP= 37 mV
1830	14.00	6.22/6.52	0.692	clr	0.24	clr	5.0 gal total ORP= 37 mV
							1835 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-4 Date & Time Started 10/22/19 1500

Project Location: 16008 60th St East Well Location & diameter 1500 NE of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.30 Depth to well bottom 13.78

Water column in well 9.48 Gallons per foot 0.16 Gallons in well 1.52 (x3=4.56)

Purging method Peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys
Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	~~Conductivity (pS)~~ mS/cm	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements)
1510	13.23	5.96 / 6.30	0.466	mod	0.49	orange	1.0 gal total ORP: 47 mV
1515	13.17	5.96 / 6.34	0.480	clr	0.44	clr	1.5 gal total ORP: 46 mV
1520	13.11	6.01 / 6.36	0.498	clr	0.34	clr	2.0 gal total ORP: 46mV
1525	13.10	6.02 / 6.36	0.501	clr	0.35	clr	2.5 gal total ORP: 46mV
1530	13.07	6.06 / 6.41	0.527	clr	0.30	clr	3.0 gal total ORP: 46mV
1535	13.06	6.07 / 6.42	0.535	clr	0.30	clr	3.5 gal total ORP: 46mV
1540	13.05	6.10 / 6.46	0.563	clr	0.27	clr	4.0 gal total ORP: 46mV
1545	13.05	6.10 / 6.46	0.562	clr	0.27	clr	4.5 gal total ORP: 46mV
1550	13.05	6.10 / 6.46	0.562		0.26	clr	5.0 gal total ORP: 46mV

pH 5.86 / meas. w/ SDL100 / measured @ YSI

1600 collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607 G

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-5 Date & Time Started 10/22/19 1615

Project Location: 16008 60th St East Well Location & diameter East Side of Bldg ; 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.15 Depth to well bottom 14.29

Water column in well 10.14 Gallons per foot 0.16 Gallons in well 1.62 (x3: 4.87)

Purging method Peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (mS/cm) ~~(µS)~~	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements) pH 5.30/6.11 → measured @ SDL 100 → measured @ YSI
1625	13.15	5.30/6.11	0.522	mod	4.94	Orange	1.0 gallon total ORP = 58 mV
1630	13.14	5.30/6.11	0.529	mod	4.57	Orange	1.5 gal total ORP = 58 mV
1635	13.13	5.28/6.11	0.525	Slight	4.47	Slt orange	2.0 gal total ORP = 58 mV
1640	13.14	5.31/6.13	0.565	clr	3.37	clr	2.5 gal total ORP = 58 mV
1645	13.14	5.31/6.14	0.567	clr	2.69	clr	3.0 gal total ORP = 58 mV
1650	13.14	5.30/6.14	0.568	clr	2.60	clr	3.5 gal total ORP = 58 mV
1655	13.13	5.30/6.14	0.569	clr	2.39	clr	4.0 gal total ORP = 58 mV
1700	13.13	5.30/6.14	0.569	clr	2.36	clr	4.5 gal total ORP = 58 mV
1705	13.13	5.30/6.14	0.569	clr	2.36	clr	5.0 gal total ORP = 58 mV

1715 Collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018 **WATER SAMPLING LOG** Sheet 1 of 1

Project Name: National Auto Well No. MW-6 Date & Time Started 10/22/19 1850

Project Location: 16008 60th St East Well Location & diameter SE of Bldg 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.01 Depth to well bottom 14.10

Water column in well 10.09 Gallons per foot 0.16 Gallons in well 1.61 (x3 = 4.84)

Purging method peristaltic Pump Volume purged 5.0 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (µS) mS/cm	Turbidity	Dissolved Oxygen mg/L	Water Color	DESCRIPTION (Volume purged between measurements) pH 5.16/6.01 → measured @ SDL100 → measured @ 3/51
1900	13.39	5.16/6.01	0.371	mod	2.31	orange	1.0 gal total ORP= 64 mV
1905	13.46	5.27/6.05	0.395	clr	1.39	clr	1.5 gal total ORP= 61 mV
1910	13.48	5.31/6.08	0.404	clr	1.28	clr	2.0 gal total ORP= 60 mV
1915	13.49	5.35/6.10	0.409	clr	1.22	clr	2.5 gal total ORP= 60 mV
1920	13.49	5.37/6.13	0.417	clr	0.92	clr	3.0 gal total ORP= 60 mV
1925	13.49	5.39/6.13	0.416	clr	0.96	clr	3.5 gal total ORP= 60 mV
1930	13.49	5.39/6.13	0.417	clr	0.97	clr	4.0 gal total ORP= 60 mV
1935	13.49	5.38/6.13	0.416	clr	0.94	clr	4.5 gal total ORP= 60 mV
1940	13.49	5.38/6.13	0.417	clr	0.93	clr	5.0 gal total ORP= 60 mV

1945 Collect Sample

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature [signature] **Date** 10/22/19

GALLOWAY ENVIRONMENTAL, INC., 15600 NE 8th St., Ste B1, 617, Bellevue, WA 98008 (425)894-8607

Project No. 37018

WATER SAMPLING LOG

Sheet 1 of 1

Project Name: National Auto Well No. MW-7 Date & Time Started 10/22/19 1230

Project Location: 16008 60th St East Well Location & diameter S of Bldg // 2"

Client Mitchell Development Site Manager Dylan Galloway Logged By Dylan Galloway

Measuring Point Notch top of PVC Initial depth to water 4.10 Depth to well bottom 13.85

Water column in well 9.75 Gallons per foot 0.16 Gallons in well 1.56 (x3 = 4.68)

Purging method Peristaltic Pump Volume purged 4.7 Decontamination Alconox & dist. H_2O

Sampler: Dylan Galloway No. type containers Two ½ L Ambers, three 40 mL VOAs, Two ½ L Polys

Sample preservation method: HNO3, HCl, Ice Other (describe)

Time	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity	Dissolved Oxygen (mg/L)	Water Color	DESCRIPTION (Volume purged between measurements)	
1240	15.25	6.22 / 6.47	0.697	Mod	0.50	orange	0.5 gallons total	ORP = 39 mV
1245	15.24	6.20 / 6.47	0.669	clr	0.66	clr	1.0 gallons total	ORP = 39 mV
1250	15.21	6.17 / 6.48	0.653	clr	0.72	clr	1.5 gallons total	ORP = 39 mV
1255	15.21	6.15 / 6.48	0.647	clr	0.72	clr	2.0 gallons total	ORP 39 mV
1300	15.21	6.15 / 6.48	0.645	clr	0.73	clr	2.5 gallons total	ORP = 39 mV
1306	15.21	6.15 / 6.48	0.645	clr	0.73	clr	3.1 gallons total	ORP = 39 mV
1312	15.21	6.14 / 6.47	0.644	clr	0.73	clr	3.7 gallons total	ORP = 39 mV
1317	15.20	6.14 / 6.47	0.645	clr	0.74	clr	4.2 gallons total	ORP = 39 mV
1322	15.20	6.14 / 6.47	0.644	clr	0.74	clr	4.7 gallons total	ORP = 39 mV
							1330 collect Sample	

pH 6.22 / 6.47 → Measured w/ YSI → measured w/ SDL100

Well casing volumes (gal/ft) – 1.25"=0.077, 1.5"=0.10, 2"=0.16, 2.5"=0.24, 3"=0.37, 3.5=0.50, 4"=0.65, 6"=1.46

Signature Date 10/22/19

APPENDIX B

LABORATORY ANALYTICAL REPORT

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 31, 2019

Dylan Galloway
Galloway Environmental, Inc.
15600 NE 8th Street, Suite B1, 617
Bellevue, WA 98008

Re: Analytical Data for Project 37018
Laboratory Reference No. 1910-296

Dear Dylan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 23, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

Case Narrative

Samples were collected on October 22, 2019 and received by the laboratory on October 23, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270E/SIM Analysis

Sample MW-7 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Hexavalent Chromium SM 3500-Cr B Analysis

The practical quantitation limit is elevated due to interferences present in the sample.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.26	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*91*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

HYDROCARBON IDENTIFICATION
NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1023W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	10-23-19	10-23-19	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	10-23-19	10-23-19	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

VOLATILE ORGANICS EPA 8260D
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

VOLATILE ORGANICS EPA 8260D
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*108*	*75-127*
Toluene-d8	*104*	*80-127*
4-Bromofluorobenzene	*102*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*108*	*75-127*
Toluene-d8	*104*	*80-127*
4-Bromofluorobenzene	*102*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*105*	*75-127*
Toluene-d8	*102*	*80-127*
4-Bromofluorobenzene	*101*	*78-125*

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*102*	*80-127*
4-Bromofluorobenzene	*100*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*104*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*98*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*106*	*75-127*
Toluene-d8	*100*	*80-127*
4-Bromofluorobenzene	*98*	*78-125*

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*103*	*75-127*
Toluene-d8	*101*	*80-127*
4-Bromofluorobenzene	*98*	*78-125*

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1024W2					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloromethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Vinyl Chloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroethane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Trichlorofluoromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Acetone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Iodomethane	ND	1.6	EPA 8260D	10-24-19	10-24-19	
Carbon Disulfide	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methylene Chloride	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Vinyl Acetate	ND	1.0	EPA 8260D	10-24-19	10-24-19	
2,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Butanone	ND	5.0	EPA 8260D	10-24-19	10-24-19	
Bromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chloroform	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Carbon Tetrachloride	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Benzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Trichloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Dibromomethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromodichloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Toluene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1024W2					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Tetrachloroethene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Hexanone	ND	2.0	EPA 8260D	10-24-19	10-24-19	
Dibromochloromethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromoethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Chlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Ethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
m,p-Xylene	ND	0.40	EPA 8260D	10-24-19	10-24-19	
o-Xylene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Styrene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromoform	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Isopropylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Bromobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Propylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
2-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
4-Chlorotoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
tert-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
sec-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
p-Isopropyltoluene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
n-Butylbenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	
Hexachlorobutadiene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
Naphthalene	ND	1.0	EPA 8260D	10-24-19	10-24-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	10-24-19	10-24-19	

Surrogate:	*Percent Recovery*	*Control Limits*
Dibromofluoromethane	*107*	*75-127*
Toluene-d8	*104*	*80-127*
4-Bromofluorobenzene	*101*	*78-125*

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1024W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.3**	**10.1**	10.0	10.0	103	101	63-130	2	17	
Benzene	**9.72**	**9.43**	10.0	10.0	97	94	76-125	3	19	
Trichloroethene	**10.1**	**9.78**	10.0	10.0	101	98	76-121	3	18	
Toluene	**9.97**	**9.74**	10.0	10.0	100	97	80-124	2	18	
Chlorobenzene	**10.3**	**9.95**	10.0	10.0	103	100	75-120	3	19	
Surrogate:										
Dibromofluoromethane					*106*	*107*	*75-127*			
Toluene-d8					*104*	*104*	*80-127*			
4-Bromofluorobenzene					*101*	*104*	*78-125*			

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Naphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*52*	*27 - 106*				
Pyrene-d10	*77*	*35 - 98*				
Terphenyl-d14	*61*	*41 - 129*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Naphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*57*	*27 - 106*				
Pyrene-d10	*83*	*35 - 98*				
Terphenyl-d14	*72*	*41 - 129*				

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Date of Report: October 31, 2019
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Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Naphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*42*	*27 - 106*				
Pyrene-d10	*68*	*35 - 98*				
Terphenyl-d14	*58*	*41 - 129*				

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Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*27 - 106*				
Pyrene-d10	*81*	*35 - 98*				
Terphenyl-d14	*85*	*41 - 129*				

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Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Naphthalene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.099	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.0099	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*27 - 106*				
Pyrene-d10	*88*	*35 - 98*				
Terphenyl-d14	*91*	*41 - 129*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Naphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*50*	*27 - 106*				
Pyrene-d10	*70*	*35 - 98*				
Terphenyl-d14	*55*	*41 - 129*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-24-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*124*	*27 - 106*				Q
Pyrene-d10	*92*	*35 - 98*				
Terphenyl-d14	*128*	*41 - 129*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1023W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-23-19	10-23-19	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*52*	*27 - 106*				
Pyrene-d10	*83*	*35 - 98*				
Terphenyl-d14	*83*	*41 - 129*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1023W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.347**	**0.339**	0.500	0.500	69	68	36 - 99	2	40	
Acenaphthylene	**0.305**	**0.336**	0.500	0.500	61	67	45 - 113	10	32	
Acenaphthene	**0.289**	**0.330**	0.500	0.500	58	66	43 - 119	13	33	
Fluorene	**0.322**	**0.346**	0.500	0.500	64	69	48 - 114	7	30	
Phenanthrene	**0.351**	**0.370**	0.500	0.500	70	74	49 - 113	5	24	
Anthracene	**0.347**	**0.366**	0.500	0.500	69	73	50 - 113	5	25	
Fluoranthene	**0.412**	**0.418**	0.500	0.500	82	84	57 - 118	1	22	
Pyrene	**0.421**	**0.427**	0.500	0.500	84	85	56 - 128	1	32	
Benzo[a]anthracene	**0.469**	**0.511**	0.500	0.500	94	102	59 - 127	9	24	
Chrysene	**0.447**	**0.462**	0.500	0.500	89	92	57 - 122	3	24	
Benzo[b]fluoranthene	**0.447**	**0.484**	0.500	0.500	89	97	58 - 123	8	26	
Benzo(j,k)fluoranthene	**0.485**	**0.506**	0.500	0.500	97	101	60 - 123	4	22	
Benzo[a]pyrene	**0.437**	**0.457**	0.500	0.500	87	91	54 - 121	4	24	
Indeno(1,2,3-c,d)pyrene	**0.442**	**0.473**	0.500	0.500	88	95	55 - 125	7	26	
Dibenz[a,h]anthracene	**0.448**	**0.478**	0.500	0.500	90	96	57 - 127	6	25	
Benzo[g,h,i]perylene	**0.460**	**0.493**	0.500	0.500	92	99	54 - 122	7	25	
Surrogate:										
2-Fluorobiphenyl					*49*	*61*	*27 - 106*			
Pyrene-d10					*86*	*92*	*35 - 98*			
Terphenyl-d14					*85*	*92*	*41 - 129*			

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*96*	*50-153*				
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*103*	*50-153*				
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*108*	*50-153*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*50-153*				
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*50-153*				
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Aroclor 1016	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.047	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*87*	*50-153*				

Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
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Project: 37018

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Aroclor 1016	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1221	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1232	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1242	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1248	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1254	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Aroclor 1260	**ND**	0.048	EPA 8082A	10-23-19	10-25-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*109*	*50-153*				

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1023W1					
Aroclor 1016	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	10-23-19	10-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*83*	*50-153*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1023W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.495**	**0.542**	0.500	0.500	N/A	**99**	**108**	70-129	9	12	
Surrogate:											
DCB						*85*	*87*	*50-153*			

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1030WM1					
Arsenic	**ND**	3.3	EPA 200.8	10-30-19	10-30-19	
Cadmium	**ND**	4.4	EPA 200.8	10-30-19	10-30-19	
Chromium	**ND**	11	EPA 200.8	10-30-19	10-30-19	
Lead	**ND**	1.1	EPA 200.8	10-30-19	10-30-19	
Laboratory ID:	MB1028W1					
Mercury	**ND**	0.50	EPA 7470A	10-28-19	10-28-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-296-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	10-296-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-296-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**122**	**123**	111	111	ND	**110**	**111**	75-125	1	20	
Cadmium	**117**	**115**	111	111	ND	**105**	**103**	75-125	2	20	
Chromium	**116**	**117**	111	111	ND	**104**	**105**	75-125	1	20	
Lead	**119**	**118**	111	111	ND	**107**	**106**	75-125	1	20	
Laboratory ID:	10-296-01										
Mercury	**12.4**	**11.6**	12.5	12.5	ND	**99**	**93**	75-125	6	20	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Mercury	**ND**	0.50	EPA 7470A		10-28-19	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1029D1					
Arsenic	**ND**	3.0	EPA 200.8		10-29-19	
Cadmium	**ND**	4.0	EPA 200.8		10-29-19	
Chromium	**ND**	10	EPA 200.8		10-29-19	
Lead	**ND**	1.0	EPA 200.8		10-29-19	
Laboratory ID:	MB1028D1					
Mercury	**ND**	0.50	EPA 7470A		10-28-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-296-07										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	10-296-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-296-07										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**83.6**	**83.0**	80.0	80.0	ND	**105**	**104**	75-125	1	20	
Cadmium	**76.6**	**77.6**	80.0	80.0	ND	**96**	**97**	75-125	1	20	
Chromium	**75.0**	**74.6**	80.0	80.0	ND	**94**	**93**	75-125	1	20	
Lead	**75.6**	**75.0**	80.0	80.0	ND	**95**	**94**	75-125	1	20	
Laboratory ID:	10-296-01										
Mercury	**12.6**	**11.6**	12.5	12.5	ND	**101**	**93**	75-125	8	20	

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Date of Report: October 31, 2019
Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	10-296-01					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-2**					
Laboratory ID:	10-296-02					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-3**					
Laboratory ID:	10-296-03					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-4**					
Laboratory ID:	10-296-04					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-5**					
Laboratory ID:	10-296-05					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-6**					
Laboratory ID:	10-296-06					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	
Client ID:	**MW-7**					
Laboratory ID:	10-296-07					
Hexavalent Chromium	**ND**	50	SM 3500-Cr B	10-23-19	10-23-19	

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Samples Submitted: October 23, 2019
Laboratory Reference: 1910-296
Project: 37018

HEXAVALENT CHROMIUM
SM 3500-Cr B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1023W1					
Hexavalent Chromium	**ND**	10	SM 3500-Cr B	10-23-19	10-23-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-296-01										
	ORIG	DUP									
Hexavalent Chromium	**ND**	**ND**	NA		NA	NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-296-01										
	MS	MSD	MS	MSD		MS	MSD				
Hexavalent Chromium	**437**	**477**	500	500	ND	87	95	75-125	9	20	
SPIKE BLANK											
Laboratory ID:	SB1023W1										
	SB		SB			SB					
Hexavalent Chromium	**96.9**		100		NA	97		85-115	NA	NA	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Galloway Environmental, Inc
Project Number: 37018
Project Name: National Auto
Project Manager: D Galloway
Sampled by: D Galloway

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 10-296

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved MTCA Metals	Hexavalent Chromium			% Moisture
1	MW-1	10/22/19	1435	W	14	X				X				X	X					X			X	X			
2	MW-2	↓	1200	↓	↓	X				X				X	X					X			X	X			
3	MW-3		1835			X				X				X	X					X			X	X			
4	MW-4		1600			X				X				X	X					X			X	X			
5	MW-5		1715			X				X				X	X					X			X	X			
6	MW-6		1945			X				X				X	X					X			X	X			
7	MW-7		1330			X				X				X	X					X			X	X			

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/23/19	0830
Received	[signature]	OSE	10/23/19	0830
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐