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Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan

Provisioners Express, Inc.
(a.k.a. Estes Express Lines)
2102 West Valley Highway North
Auburn, Washington

VCP No. NW 2532

Prepared For:

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ABBREVIATIONS AND ACRONYMS

Abbreviation/ Acronym	Definition
AGI	Atlantic Geosciences, Inc.
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
CAP	Cleanup Action Plan
COC	Contaminant of concern
COPC	Contaminant of potential concern
CSM	Conceptual site model
CUL	Cleanup level
DO	Dissolved oxygen
DRPH	Diesel-range petroleum hydrocarbons
EC	Environmental Covenant
Ecology	Washington State Department of Ecology
EMR	Environmental Management Resources
EPA	U.S. Environmental Protection Agency
EPI	Environmental Partners, Inc.
ERM	Environmental Resources Management
ESA	Environmental Site Assessment
FS	Feasibility Study
GRPH	Gasoline-range petroleum hydrocarbons
HRPH	Higher-range petroleum hydrocarbons
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
NFA	No Further Action
NWTPH-Dx	Northwest Total Petroleum Hydrocarbons Diesel Range Extended
PCS	Petroleum-contaminated soil
POC	Point of compliance
PVC	Polyvinyl chloride
RI	Remedial investigation
RI/FFS/CAP	Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
RTF	Restoration time frame
TEE	Terrestrial Ecological Evaluation
UST	Underground storage tank
VCP	Voluntary Cleanup Program
VOC	Volatile organic compound
WAC	Washington Administrative Code
WESTON	Roy F. Weston

1.0 INTRODUCTION

Environmental Partners Inc. (EPI), is pleased to present this *Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan* (RI/FFS/CAP) for Provisioners Express (a.k.a. Estes Express Lines) located at 2102 West Valley Highway North Auburn, WA (subject property). The location of the subject property is presented on Figure 1. The lateral and vertical extent of diesel-range petroleum hydrocarbons (DRPH) and heavier-range petroleum hydrocarbons (HRPH) impacts constitutes the Estes Express Lines "Site" under the Washington State Model Toxics Control Act (MTCA), Chapter 70.105D of the Revised Code of Washington (RCW), and its associated Cleanup Regulations, Chapter 173-340 of the Washington Administrative Code (WAC), collectively referred to as "MTCA" in this report.

Under MTCA, 173-340-200 WAC, a Site is defined by the nature and extent of contamination associated with one or more releases of hazardous substances prior to any cleanup of the contamination. A Site is NOT defined by the property or parcel boundary and can be smaller or larger than the property with which it is associated. Refer to *Guidelines for Property Cleanups under the Voluntary Cleanup Program* (Publication No. 08-09-044) for further discussion on the relationship between properties and Sites.

The purpose of a remedial investigation (RI) is to collect, develop, and evaluate sufficient information regarding the Site to facilitate evaluation and selection of an appropriate cleanup action (WAC 173-340-350). Furthermore, the work described herein is intended to meet the requirements for a feasibility study (FS) under MTCA. The purpose of a feasibility study "…*is to develop and evaluate cleanup action alternatives to enable a cleanup action to be selected for the site*" (WAC 173-340-350). The work documented herein is sufficient to meet this requirement. Contaminants of concern (COCs) at the Site are limited DRPH and HRPH and impacts are limited to shallow soil and shallow groundwater within a small, well-defined area of the property, as shown on Figure 2. Because the Site is defined by only two closely-related COCs present in shallow soil and shallow groundwater within a small defined area, a focused feasibility study (FFS) is appropriate for this Site.

A brief Cleanup Action Plan (CAP) is provided as part of this report. Because the selected cleanup action is already in place and operating at the Site, the CAP presents a brief overview of the rational for remedy selection, operational history of the selected remedy, including the procedures for continued operation of the system, and a schedule for monitoring and reporting system performance.

1.1 General Site Information

The Provisioners Express (a.k.a. Estes Express Lines) facility is located at 2102 West Valley Highway North Auburn, Washington, east of the intersection of 22nd street Northwest and West Valley Highway North (Figure 1). Northwest quarter of section 12, township 21 north, range 4 east, Willamette meridian in King County, Washington. The tax parcel number for the property is 1221049034 and the zoning is designated M-1, Light Industrial.

The property is fully paved or covered by buildings and has a stormwater conveyance system consisting of catch basins that are connected to an oil/water separator through underground piping with discharge to the municipal sewer system. Pavement is primarily asphalt with concrete pads surrounding the on-Site buildings and loading bays.

The topography of the property is relatively flat with an approximate elevation of 65 feet above mean sea level (USGS 1973). Mill Creek and the White River Park Wetland System are the nearest surface water bodies and are located approximate 200 feet to the southeast of the Site. A drainage ditch flowing to the White River Park Wetland System is present near the south property boundary, approximately 40 feet south of the Site. The property and the Site are separated from Mill Creek and the White River Park Wetland System by an adjoining property (parcel #1221049035). The nearest major surface water body, the Green River, is located approximately 1.7 miles to the east of the Site.

The property contains a single MTCA Site that is defined by the lateral and vertical extent of soil and groundwater impacted by DRPH and HRPH at concentrations greater than applicable MTCA Method A Cleanup Levels (CULs). The location of the Site within the property is shown on Figure 2. Under the MTCA program, the Facility Site Identification number (FSID) is 91612121, Cleanup Site Identification number (CSID) is 6847, and the Voluntary Cleanup Program (VCP) number is NW2532.

The property owner is Mr. David Pollart, PO Box 1096 Mercer Island, WA 98040, (206) 948-1330, dapol13@gmail.com. The current facility operator at the property is Estes West Express Lines (Estes Express Lines), located at 2102 West Valley Highway North Auburn, WA. The contact person for Estes Express Lines is Angela J. Maidment, Vice President Corporate Real Estate, (804) 353-1900 ext. 2263, angela.maidment@estes-express.com. Environmental Partners Incorporated (EPI, is the environmental consultant working on behalf of Mr. Pollart. EPI's address is 1180 NW Maple Street Issaquah, WA 98027. The EPI project manager for this project is Mr. Douglas Kunkel, L.G., L.H.G., his phone number is (425) 395-0016, email address is dougk@epi-wa.com. The Washington State Department of Ecology (Ecology) Site Manager is Ms. Jing Song, L.G., Ms. Song's phone number is (425) 649-7109 and email address is jing.song@ecy.wa.gov.

1.2 Site History

EPI's understanding of pre-2011 historical uses of the subject property is based on information presented in a pre-lease assessment report prepared by Roy F. Weston, Inc. and included electronically in Attachment A. The post-2011 Site history is based on Ecology's 5-year periodic reviews, information provided by the property owner and information obtained from EPI's reports and direct observations at the subject property and Site.

1.2.1 Site Use History

According to the pre-lease assessment report, the subject property and adjacent properties were undeveloped until the mid-1980s. Provisioners Express, Inc. a refrigerated goods carrier and distribution company, was the initial tenant at the subject property after the property was developed in 1988. GI Trucking leased the property beginning in 2000 with use as a motor freight terminal, distribution center, and truck maintenance facility. In 2002 GI Trucking was purchased by Estes Express Lines, the current tenant at the subject property. Estes Express Lines continues to operate the subject property as a motor freight terminal with an on-Site truck maintenance facility.

Fleet maintenance and oil and diesel storage operations were conducted in the on-Site truck maintenance building, which is the only building within the boundaries of the MTCA-defined Site. The building continues to be used for those purposes. Evidence of spills and presence of cracks on the building floors represents a potential pathway for contaminants to reach soils and groundwater (WESTON 1999).

1.2.2 Site Release History

The following sections describe the history of petroleum hydrocarbon releases at the subject property, resulting in the impacts observed at the Site.

1.2.2.1 550-Gallon Waste Oil Underground Storage Tank

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from product piping associated with a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the truck maintenance building. The 550-gallon UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed in December 1998 and April 1999. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 3.

The source of groundwater impacts at MW-1, MW-9, and Phase II Environmental Site Assessment (ESA) sampling points DP-2, DP-3, and DP-4 is the petroleum impacted soil remaining under the exterior wall of the northwest corner of the truck maintenance building. The truck maintenance building has a flat roof served by roof drains at the corners of the building. The roof drain at the northwest corner of the building potentially causes temporary groundwater mounding, which could push petroleum-impacted groundwater a short distance upgradient and cross-gradient of the drain. The natural horizontal hydraulic gradient at the Site is so flat that even minor leakage from the roof drain could temporarily affect local groundwater flow patterns.

Soil samples collected from the top of the water table at DP-1 through DP-5 were all non-detect for DRPH and HRPH, except at DP-3, which is located a few feet from the northwest corner exterior wall of the truck maintenance building. Even at DP-3, DRPH and HRPH concentrations were far less than MTCA Method A CULs. Because the soil samples for DP-1 through DP-5 were “clean” there is no reason to suspect another soil source area for petroleum hydrocarbons upgradient or crossgradient of MW-1. Groundwater contamination to the east of MW-1 is delineated by MW-2 and MW-3. Groundwater contamination to the south of MW-1 is delineated by MW-4 and MW-5. Groundwater to the west of MW-1 is upgradient and was investigated by DP-2 from the Phase II investigation described in Section 2.1.11.

1.2.2.2 12,000-Gallon Diesel Fuel Underground Storage Tank

On November 28, 2012, a 12,000-gallon diesel fuel UST was decommissioned and removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel fuel UST is shown on Figure 3. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The 12,000-gallon diesel fuel UST was reportedly not used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. The water sample from the bottom of the excavation was rinse water containing diesel that spilled from the UST as it was removed from the excavation due to improper rigging and hoisting of the UST. EPI prepared an

Underground Storage Tank Site Assessment Report, dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. Refer to EPI's *Phase II Environmental Site Assessment Report*, dated December 9, 2013, for additional details regarding the Phase II ESA activities and soil and groundwater sampling results. Electronic files for both reports are presented in Attachment A.

1.2.2.3 Other Potential Releases

Several less-defined potential releases resulting from normal operations and housekeeping issues have occurred at the Site. EPI has previously expressed such concerns in quarterly groundwater reports. However, there are no specific data that indicate that housekeeping issues have impacted soil or groundwater. In addition, the tenant housekeeping has improved.

1.2.3 Site Regulatory History

Ecology issued a conditional No Further Action (NFA) determination for the Site in January 2000. The NFA determination contained the condition that quarterly groundwater monitoring and reporting be continued until "this Site demonstrates sustained, continuous compliance with MTCA Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately quarterly from December 1998 until October 2002.

In November 2002, the property owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, DRPH, or HRPH were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding the MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's VCP due to inactivity.

The Site re-entered Ecology's VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the on-Site wells under the VCP resumed in August 2011 and continues as of the date of this report (November 2017). There have been 24 quarterly groundwater monitoring events performed at the Site since the initial August 2011 sampling event. Historical quarterly groundwater monitoring reports were submitted to Ecology and are on file at Ecology's Northwest Regional Office.

On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA Method A CUL and the previous groundwater remedy (excavation of PCS followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

The Site has an existing Environmental Covenant, which will be amended to the current Ecology format as described in further detail elsewhere in this report.

1.3 Current Site Use

The Site is currently leased by Estes Express Lines, a motor freight transportation company. Estes Express Lines uses the Site primarily for shipping/truck distribution and fleet maintenance. Estes Express Lines intends to purchase the property and continue property use consistent with Motor Freight Terminal operations.

2.0 FIELD INVESTIGATIONS

The Estes Express Lines Site has been the subject of many field investigations performed primarily by Atlantic Geosciences, Inc., Roy F Weston, Environmental Management Resources, and, most recently, EPI. The following sections summarize the prior work performed and the results of the historical investigations. Historical reports, which provide more detailed information on which the following summaries are based, are provided as electronic files in Attachment A.

2.1 Previous Environmental Investigations

The following sections summarize the results of historical environmental investigations conducted at the Site.

2.1.1 Atlantic Geosciences Phase I ESA – September 1998

The Department of Ecology 5-year Periodic Review dated December 2016 states: *Atlantic Geoscience, Inc. (AGI) conducted a Phase 1 ESA of the Provisioners property on behalf of a prospective buyer in September 1998. The Phase 1 also included a limited subsurface investigation in which 5 soil borings were advanced near the diesel and waste-oil UST's to assess any potential releases from them. Three borings B-1 and B-3 were advanced near the diesel UST and oil-water separator, and two borings (B-4 and B-5) were within the footprint of the waste oil UST excavation and removed thereafter. Soil and groundwater samples collected from four of these borings were analyzed for petroleum hydrocarbons by hydrocarbon identification (WTPH-HCID) analysis, which is a semi-quantitative screening level analytical test. However, during drilling of soil boring B-4, free product (as oil) was encountered at approximately 6-feet bgs. Therefore, no soil or groundwater samples were collected from this boring. Analytical results from soil samples collected from the soil borings around the diesel UST and B-5 indicated no hydrocarbons were present in soil at these locations. However, all groundwater samples collected contained oil, gasoline, and diesel-range hydrocarbons above MTCA CULs for gasoline range, diesel range, and motor oil range organics (AGI 1998).* This information was obtained from Ecology's Periodic Review Provisioners Express, (Ecology, 2016), which is presented electronically in Attachment A.

2.1.2 Environmental Management Resources Remedial Excavation – October 1998

The Department of Ecology 5-year Periodic Review dated December 2016 states: *In October 1998 EMR conducted UST closure assessment for the 550-gallon waste oil UST located near the NW corner of the truck maintenance building (see Figure 3). The remedial excavation indicated that the source of impacts was from a 4-inch subsurface drain line that sheared off approximately 2-3 feet from the UST drain hole. This drain line was connected to two floor drains and sumps inside the truck maintenance building. Approximately 350 cubic yards of contaminated soil were excavated and disposed offsite. EMR collected post-excavation samples following removal of impacted soil. The samples were analyzed for DRPH and HRPH by the Northwest Total Petroleum Hydrocarbon Diesel Range Extended (NWTPH-Dx) method Analytical results indicated that soil samples from the bottom, north, east, and west sidewalls of the excavation had no detections of DRPH or HRPH. The south sidewall sample (adjacent to the truck maintenance building) had a DRPH concentration of 2,200 mg/kg and a HRPH concentration of 600 milligrams per kilogram (mg/kg). A follow-up dye tracer test demonstrated the drain line had leaked and was the source of impacts to soil and groundwater.*

On November 3, 1998 EMR returned to the Site to excavate a trench inside of the building below both floor drains/sumps and along the drain line that leaked. EMR reported localized oil seeps at approximately 3-4 feet below ground surface (bgs). EMR collected 11 soil samples along the sidewalls and bottom of the completed excavation and analyzed them for DRPH and HRPH by method NWTPH-Dx. Analytical results indicated concentrations of petroleum hydrocarbons remained greater than MTCA Method A CULs along the sidewalls of the excavation and in at least one of the bottom samples.

Although most of the impacted soil was removed by the two excavation events, impacted soil was left in place under the exterior walls in the northwest corner of the truck maintenance building. Removal of this impacted soil was limited because full removal would affect the structural integrity of the building. An electronic file of this report is provided in Attachment A.

2.1.3 Environmental Management Resources Probe Investigation – November 1998

The Department of Ecology 5-year Periodic Review dated December 2016 states: *A direct-push probe investigation was conducted in November 1998 to delineate the extent of the oil seeps inside the garage. EMR's drilling subcontractor advanced 16 probes from which ten subsurface soil samples were analyzed for DRPH and HRPH by the NWTPH-Dx method. Selected samples were also analyzed for benzene, toluene, ethylbenzene, xylene (BTEX) and gasoline range hydrocarbons by the NWTPH-G/BTEX methods. Analytical results of these soil samples indicated that concentrations above MTCA Method A Soil CULs for oil, diesel, mineral spirits and xylene remained beyond the extent of the excavation inside the maintenance garage.* An electronic file of this report is provided in Attachment A.

2.1.4 Environmental Management Resources Well Installation (MW-1 through MW-4) – December 1998

The Department of Ecology 5-year Periodic Review dated December 2016 states: *EMR installed three groundwater monitoring wells (MW-1 through MW-3) at the Site in December 1998. EMR sampled the wells and analyzed the groundwater samples for DRPH and HRPH using the NWTPH-Dx method. No concentrations of DRPH or HRPH were detected from analytical results of groundwater samples collected from MW-1 and MW-3; however, concentrations of 250 micrograms per liter (µg/L) of gasoline range hydrocarbons GRPH and BTEX compounds were detected in the sample from MW-2. Except of MW-2, none of the samples contained concentrations above MTCA Method A CULs (EMR 1999e). An additional groundwater monitoring well, MW-4 was installed early in 1999.* An electronic file of this report is provided in Attachment A.

2.1.5 EMR Groundwater and Surface Water Sampling – April and September 1999

The Department of Ecology 5-year Periodic Review dated December 2016 states: *Based on a recommendation from Ecology EMR conducted another round of groundwater sampling in April 1999 and collected a surface water sample from a ditch north of the UST excavation. All samples were analyzed for GRPH, DRPH, and BTEX. Analytical results for these samples indicated no detectable concentration of GRPH or BTEX were present in the surface water sample. Xylene was the only reported exceedance to MTCA Method A CULs in groundwater in a sample from MW-2 (EMR 1999e). The report also presented the results of five additional direct-push-probes advanced at the Site. An EMR report for the fourth round of groundwater sampling conducted September 1999 at the Site indicated that benzene at MW-2 exceeded the MTCA Method A Groundwater CUL.* An electronic file of this report is provided in Attachment A.

2.1.6 EMR Independent Remedial Action Report – 1999

EMR's Independent Remedial Action Report summarizes the removal of the 550-gallon waste oil UST, floor drains, piping, and impacted soil under and around the north end of the truck maintenance building. These activities are summarized in the previous sections.

2.1.7 Roy F. Weston Pre-Lease Phase I ESA and Limited Subsurface Investigation – November 1999

The Department of Ecology 5-year Periodic Review dated December 2016 states: *Roy F. Weston (WESTON) completed a Pre-Lease Assessment consisting of a Phase 1 ESA and limited subsurface investigation. WESTON was engaged by US West Communications, Inc. (US West) to conduct the assessment and investigation in accordance with the American Society for Testing and Materials (ASTM) E 1527-97 guidelines and US West specifications. The principle objective for the ESA was to identify potential environmental liabilities associated with the present and historical use of the property, physical condition of the grounds, existing operational practices, and potential impacts from surrounding areas as set forth in a proposal submitted to US West dated 18 November 1999. The purpose of the limited subsurface investigation was to address known existing contamination at the property, and to evaluate* *the current conditions of soil and groundwater in these problem areas. The information presented in that report was obtained from a review of property records and previous environmental investigations, a reconnaissance of the Site and interviews with the property owner and regulatory officials, and collection of soil and groundwater samples for chemical analysis.*

Weston conducted a limited subsurface investigation near the former 550-gallon waste oil UST and 12,000-gallon diesel UST on November 13, 1999. Soil samples were collected using a direct-push probe rig at five sampling locations designated GP001 through GP005. The samples were field screened based on visual and olfactory indicators of petroleum hydrocarbons. One sample from each boring was selected for laboratory analysis based on the field screening. Samples were analyzed for GRPH, DRPH, HRPH, volatile organic compounds (VOCs). HRPH was detected in all five samples at concentrations ranging from 13 mg/kg to 160 mg/kg. The MTCA Method A soil CUL for HRPH is 2,000 mg/kg. GRPH was detected in one sample at a concentration of 32 mg/kg. The MTCA Method A soil CUL for GRPH is 100 mg/kg, 30 mg/kg when benzene is present. VOC analytical results had only trace detections of VOCs that are common laboratory contaminants.

Three groundwater samples were submitted for GRPH, DRPH, HRPH, and VOC analyses; one additional sample, from GP004, was analyzed for GRPH and VOCs only. DRPH was detected in the three samples submitted for that analysis at concentrations ranging from 0.59 milligrams per liter (mg/L) to 2.2 mg/L. GRPH was detected in the sample from well MW-2 at a concentration of 0.44 mg/L. The MTCA Method A groundwater CUL was 1 mg/L at the time. Benzene was detected in the sample MW-2 at a concentrating of 26 micrograms per liter (µg/L); this is the only VOC detected at a concentration greater than its MTCA Method A CUL of 5 µg/L. An electronic file of this report is provided in Attachment A.

2.1.8 EMR Groundwater Monitoring – December 1998 to October 2002

The Department of Ecology 5-year Periodic Review dated December 2016 states: *Ecology agreed with the protectiveness of the waste oil cleanup for the former 550-gallon waste oil tank and associated subsurface piping and issued a conditional no further action (NFA) determination for the Site in January 2000. The conditional NFA required quarterly groundwater monitoring and reporting be continued until "this Site demonstrates sustained, continuous compliance with MTCA CULs for at least one year." The NFA letter also required analyses for BTEX, GRPH, DRPH, and HRPH. Available records indicate that the monitoring wells MW-1 through MW-4 were sampled approximately quarterly from December 1998 until October 2002.*

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from MW-2. At that time, the sample from MW-2 had a GRPH concentration of 180 µg/L and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, DRPH, or HRPH were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records *indicate that the Site was subsequently dropped from Ecology's VCP due to inactivity.* An electronic file of this report is provided in Attachment A.

2.1.9 Environmental Partners, Inc. Underground Storage Tank Site Assessment Report – January 2013

This *Underground Storage Tank Site Assessment Report* documents the decommissioning of the 12,000-gallon diesel fuel UST formerly located south of the truck maintenance building (Attachment A). According to available information, the 12,000-gallon UST was pumped and taken out of service in 1998 at the time of the waste oil UST removal. Groundwater samples collected from MW-4, located within 25 feet of the 12,000-gallon UST, have never had concentrations of DRPH or HRPH greater than MTCA Method A groundwater CULs.

The UST was decommissioned and removed in a manner fully consistent with requirements of the MTCA regulation and applicable Ecology guidance. Six soil samples were collected from the sidewalls, ends, and bottom of the UST excavation. DRPH and HRPH were not detected in five of the six soil samples. One sample, from the west bottom of the excavation, had a DRPH detection of 230 mg/kg, which is significantly less than the MTCA Method A CUL of 2,000 mg/kg.

The single-wall fiberglass 12,000-gallon UST appeared to be intact and in good condition without any visible holes or damaged areas. Soil samples from the excavation, as noted in the previous paragraph, support this observation. While lifting the UST from the excavation, Saybr Contractors Inc. (subcontractor responsible for tank removal and soil excavation) placed a single lifting strap on the middle of the UST. This inadequate rigging unbalanced the UST, causing the west end of the UST to crash into the bottom of the excavation, breaking the end of the fiberglass UST and spilling rinse water out of the tank into the excavation. After this incident, a grab sample of water from the bottom of the excavation was collected and analyzed. This grab sample had DRPH at a concentration of 55,000 µg/L, and HRPH at a concentration of 790 µg/L. A vacuum truck was mobilized to the Site and approximately 1,500 gallons of diesel-impacted rinse water and groundwater was removed from the excavation. The *Underground Storage Tank Site Assessment Report* is provided electronically in Attachment A.

2.1.10 Environmental Partners, Inc. MW-5 and MW-6 Well Installation – 2013

In 2013, Ecology requested installation of two additional wells designated MW-5 and MW-6. Boring logs for these wells are provided in Attachment B. Well MW-5 was installed at the southwest corner of the truck maintenance building, near the on-Site oil water separator, to monitor groundwater downgradient of MW-1 and the remedial excavation for the former 350-gallon waste oil tank. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel fuel UST excavation to evaluate groundwater quality based on high petroleum hydrocarbon concentrations in the spilled rinse water sample from the bottom of the UST excavation. As noted above, this water sample was collected immediately after the UST spilled rinse water into the excavation during decommissioning activities.

2.1.11 Environmental Partners, Inc. Phase II ESA – December 2013

EPI conducted a Phase II ESA to further characterize the Site. Nine soil borings, designated DP-1 through DP-9, were advanced to 10 feet bgs at locations selected in consultation with Ecology. Locations of the Phase II ESA probes are presented on Figure 4. Probes DP-1 through DP-5 surround impacted well MW-1 in all four cardinal directions and to the southeast, which is the general groundwater flow direction at the Site based on extensive historical groundwater level data. DRPH and HRPH were not detected in four of the five soil samples collected from DP-1 through DP-5. The sample from DP-3 had detections of DRPH and HRPH at concentrations of 180 mg/kg and 280 mg/kg, respectively; both are less than the MTCA Method A CUL of 2,000 mg/kg. DRPH and HRPH detections in the soil sample from DP-3 are likely representative of outside edge of the impacted soil under the truck maintenance building foundation.

Groundwater was also collected from probes DP-1 through DP-9. Data below MTCA Method A CULs in the sample from DP-1 to the north or MW-1 indicate that groundwater impacts are not likely coming from the adjoining property to the north. The groundwater hot spot is at DP-3, where impacted soil was left in place in order not to destabilize the foundation of the truck maintenance building. DRPH and HRPH were not detected in the groundwater sample from DP-5, indicating that groundwater impacts noted at MW-1 and DP-2 through DP-4 do not extend to the southeast.

DP-6 through DP-9 were placed in locations downgradient of the former 12,000-gallon diesel fuel UST. Groundwater detections of DRPH from DP-6 and DP-8 are at concentrations less than their MTCA Method A CULs. These data indicate that the diesel impacts to groundwater from the spill of rinse water during UST decommissioning extend to somewhere between well MW-6 and probes DP-6 and DP-8. HRPH was detected at 730 µg/L in the sample from DP-8; however, the presence of HRPH is likely not attributable to the former 12,000-gallon diesel fuel UST. The two sampling locations downgradient of the former UST, MW-6 and DP-6 both have detections of DRPH at concentrations well below MTCA Method A CULs and are non-detect for HRPH. EPI's Phase II ESA report, dated December 9, 2013, contains additional details regarding the Phase II ESA activities and soil and groundwater sampling results. An electronic copy of the Phase II ESA report is provided in Attachment A.

2.1.12 Environmental Partners, Inc. Conditional Point of Compliance Well Installation – August 2016

On August 26, 2016, EPI oversaw the drilling and sampling of two soil borings, designated BH-1 and BH-2; and the installation of two Conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. Boring logs for the Conditional POC wells and soil borings are provided in Attachment B. BH-1 and BH-2 were drilled east of the former diesel fuel UST to evaluate subsurface conditions immediately downgradient of the former UST.

Conditional POC well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel fuel UST and existing well MW-6. Conditional POC well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel fuel UST and existing well MW-6. The purpose of Conditional POC monitoring wells MW-7 and MW-8 is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel fuel UST, which is a source area for diesel impacts to groundwater at the Site. MW-3 is also designated as a Conditional POC well to monitor groundwater downgradient of the residual impacted soil under the northwest corner of the truck maintenance building, which is the other source area for diesel impacts to groundwater at the Site. Figure 3 shows the locations of borings and monitoring wells relative to Site features.

2.1.13 Environmental Partners, Inc. MW-9 Well Installation – August 2017

Monitoring well MW-9 was installed by Holt Services on August 11, 2017 at a location near the northwest corner of the truck maintenance building as shown on Figure 3. This additional well was requested by Estes Express Lines as part of their environmental due diligence for a potential purchase of the property. Historical direct-push probe data from this location (i.e., DP-3 from the Phase II ESA) indicated elevated concentrations of DRPH and HRPH in groundwater and to a lesser extent in soil. The boring log for MW-9 is presented in Attachment B. Additional information regarding well MW-9, including well development data, are provided in the *September 2017 Groundwater Sampling Report – Twenty-Fourth Round*, included in Attachment C.

2.2 Ongoing Environmental Investigations and Cleanup Actions

The following sections summarize the ongoing environmental investigations and cleanup actions conducted at the Site.

2.2.1 Environmental Partners, Inc. Quarterly Groundwater Monitoring – August 2011 to Present

The Site re-entered Ecology's VCP in August 2011. Quarterly groundwater sampling of the on-Site wells under the VCP resumed in August 2011 and continues as of the date of this report (November 2017). There have been 24 quarterly groundwater monitoring events performed at the Site since EPI's initial August 2011 sampling event. An electronic file of the most recent quarterly monitoring event (September 2017) is included in Attachment C. Historical quarterly groundwater monitoring reports were submitted to Ecology and are on file at Ecology's Northwest Regional Office.

From August 2011 to August 2013 the wells were sampled for GRPH, BTEX, DRPH, and HRPH. During that time, spanning nine quarterly events, GRPH and BTEX compounds were not detected in any groundwater samples from the Site. In the August 2013 quarterly groundwater report EPI requested to discontinue GRPH and BTEX analyses at the Site based on nine consecutive quarters of non-detections of those compounds in samples from all wells. Ecology approved this request and GRPH and BTEX analyses were discontinued beginning with the November 2013 quarterly groundwater monitoring event. As a result, GRPH and BTEX are no longer COCs for the Site.

Groundwater data from the September 2017 sampling event demonstrate that DRPH and HRPH concentrations are less than MTCA Method A CULs in samples from all wells, except for new well MW-9. MW-9 was installed in August 2017 at a location immediately adjacent to the northwest corner of the truck maintenance building. As noted previously, the northwest corner of the truck maintenance building is where a small volume of petroleum-impacted soil remains because it could not be safely excavated without potential structural damage to the building walls and foundation.

2.2.2 Environmental Partners, Inc. Groundwater Remediation System – May 2014 to Present

Despite successful source removal of impacted soil in 1998, analytical data for groundwater samples from the Site indicate that MW-1 had the greatest and most consistently detected concentrations of DRPH and HRPH. The data indicate that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration time frame; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 at the locations shown on Figure 5. The radius of influence around each of the air injection wells in Figure 5 is a conservative estimate based on observed effects (i.e., air bubbles and groundwater level effects) in well MW-1 during system startup. The radius of influence is at least the distance from air injection well AI-2 to MW-1 as shown in Figure 5.

Air injection wells are equipped with 1-foot lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15 feet bgs. The purpose of the air injection wells and compressor system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

In January 2015, based on a positive response to operation of the air injection remediation system at MW-1, EPI installed three additional shallow air injection wells at locations upgradient of MW-6 as shown on Figure 5. The three new air injection wells are constructed like the air injection wells at MW-1. The expanded air injection remediation system at MW-6 was first operated and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until June 2015 when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring compressor replacement.

Since that time, the air injection system has run intermittently with several mechanical breakdowns of the compressor that caused temporary shut downs. EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt-specific motor. The compressor was started up on November 16, 2016 and air flow to the air injection wells was re-established with one compressor breakdown due to a manufacturing defect, which was completed under warranty at the manufacturer's facility.

Since installation in 2015, air injection well AI-6, located near monitoring well MW-6, consistently had low air flow that decreased over time. EPI tested, evaluated, and attempted to increase air flow through AI-6 with no measurable improvement and determined that the well was plugged and unrepairable. On June 26, 2017 Holocene Drilling, under EPI direction, decommissioned AI-6 per Ecology well decommissioning requirements and replaced it with air injection well AI-6R. Additional information regarding replacement air injection well AI-6R is provided in the September 2017 groundwater sampling report in Attachment C.

More details regarding the air injection system layout, construction, dates of operation, and effect on groundwater data, are presented in the Cleanup Action Plan of this RI/FS/CAP, Section 7.0.

2.3 Site Characterization

The Site has been characterized through the historical environmental investigations summarized in Section 2.1 and through ongoing monitoring and remedial actions as summarized in Section 2.2. Based on the extensive dataset for the Site there are two areas containing soil and/or groundwater that have been impacted by historical releases of petroleum hydrocarbons: the northwest corner of the truck maintenance building and the area at the former 12,000-gallon UST. Both areas have undergone historical remediation efforts and both are currently being further remediated by ongoing active air injection groundwater remediation systems described in Section 2.2.2.

The following sections summarize investigation methods and procedures used at the Site. These procedures are specific to EPI. Methods used by previous consultants are documented in historical reports in Attachment A.

2.3.1 Soil Sampling Procedures

Prior to any subsurface investigation, field staff meet with a qualified underground utility locating service at the Site to mark and clear the proposed direct-push or hollow-stem-auger sampling locations and adjust the locations as needed to avoid underground and overhead utilities. EPI staff also mark the areas to be cleared by public utility locating services, as required by law, using white spray paint specifically formulated for temporarily marking pavement.

Soil samples from probes or soil borings are collected from the depth intervals specified in the project instructions for that specific investigation. Soil samples are field screened using a photoionization detector (PID) and visual and olfactory indicators. Sample intervals that are evaluated to be more impacted based on field screening results are submitted for laboratory analysis of DRPH and HRPH using the NWTPH-Dx method.

Soil samples from direct-push probes are collected from acetate-lined sampling cores using single use, decontaminated, stainless-steel sampling scoops. Soil samples from hollow-stem-auger soil borings are collected using decontaminated stainless-steel split spoon samplers and single use, decontaminated, stainless-steel sampling scoops. Soil sampling equipment that is not new single-use is decontaminated by washing with a solution of Liquinox™ and potable water followed by a deionized water rinse. Decontaminated equipment is air dried prior to use.

Representative soil samples are placed into new, appropriate, laboratory-supplied sample jars and are placed into a cooler containing sufficient bagged ice to maintain an internal temperature of 4ºC or lower. Soil samples are delivered to an Ecology-certified analytical laboratory for analysis following standard chain of custody procedures.

2.3.2 Groundwater Sampling Procedures

Prior to groundwater sampling, all on-Site wells are opened to allow water levels to equilibrate. Depth to water and total depths are measured in each well using an electronic water level meter that is decontaminated between wells by spray rinsing with a solution of Liquinox™ and potable water followed by a spray rinse with deionized water. To ensure reproducibility and consistency of the depth to water data, all measurements are made to the north side of the top surface of the polyvinyl chloride (PVC) well casing. Monitoring well measuring point elevations are surveyed to the North American Vertical Datum 1988 (NAVD88). Groundwater is shallow at the Site, commonly encountered at approximately 3 to 6 feet bgs.

Prior to sampling, the monitoring wells are purged using a peristaltic sampling pump and following low-flow, low-impact well purging techniques consistent with U.S. Environmental Protection Agency (EPA) guidance for *Low Stress (Low-Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (EPA 2010). Purge water is tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every 3 to 5 minutes using an inline flow-through well for all parameters. Samples are collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field stabilization criteria are presented below:

- pH: ±0.1 pH unit
- Specific Conductance: ±3%
- Temperature: ±3%
- Dissolved Oxygen: ±10% for values greater than 0.5 mg/L, if < 0.5 mg/L assume stability
- Oxidation Reduction Potential: ±20 millivolts
- Turbidity: ±10% if >5 NTU, if three consecutive turbidity values are <5 NTU assume stability

Purge water is transferred to Department of Transportation (DOT)-approved steel 55-gallon drums and is temporarily stored near the northwest corner of the truck maintenance building pending disposal characterization.

Groundwater samples are collected for DRPH and HRPH analyses using NWTPH-Dx method (extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers are placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples are transported under standard Chain-of-Custody protocols an Ecology certified analytical laboratory for analysis.

2.3.3 Monitoring Well Installation Procedures

Monitoring wells at the Site were installed using hollow-stem-auger drilling equipment. The borehole for each well was advanced to a depth of 13 to 15 feet bgs. Soil conditions at each location were characterized by the field geologist and described on a field log. Boring logs for the EPI-installed wells are provided in Attachment B.

Monitoring wells MW-1 through MW-9 are constructed of 2-inch diameter, Schedule 40 PVC with a 10-foot length of 0.010-inch factory-slotted well screen. Each well is completed with blank PVC riser pipe installed from the top of the screened interval to just below the ground surface. A filter pack of 10/20, or equivalent, silica sand was placed around each screened interval, extending from the bottom of the well screen to approximately 1 foot above the top of the well screen. A surface seal of bentonite chips was placed from the top of the filter pack to within approximately 12 to 18 inches of ground surface and the surface was completed with a traffic-rated monument and set in concrete. Well construction details are included on the well logs in Attachment B.

Following installation each monitoring well was developed using a new, single-use polyethylene bailer, a peristaltic pump equipped with new, single-use tubing, or a new, dedicated 12-volt submersible pump and a combination of surging and pumping. Well development water was tested with appropriate water quality instruments for pH, conductivity, temperature, and turbidity at approximately 10- to 15-minute intervals throughout the well development process. Well development continued until the well yielded water that was turbidity free to the satisfaction of the EPI geologist.

2.3.4 Well Surveying Procedures

Monitoring well locations and elevations were surveyed by Pace Engineers. The measuring points and groundwater elevations provided in this report are relative to NAVD 88, rather than a property-specific datum that was used for previous reports. Horizontal coordinates for the surveyed wells and other on-Site features (i.e., air injection wells, boreholes BH-1 and BH-2, and catch basins near the Site) are relative to the North American Datum of 1983 (NAD 83), Washington State Plane, North Zone. The survey report for the property is presented in the September 2017 groundwater sampling report in Attachment C.

2.4 Site Geology

Soils at and near the subject property are classified as the Norma sandy loam, which is part of the Norma Series. The Norma Series is characterized by poorly-drained soils formed in alluvium under sedges, grasses, conifers, and hardwoods. The Norma sandy loam occurs in strips approximately 25 to 300 feet wide with slopes of less than 2 percent. In a typical soil profile, the A-horizon ranges from black to very dark brown sandy loam with up to 15 percent gravel. The B-horizon is typically sandy loam, stratified in places, with a silt loam and loamy sand with up to 35 percent gravel. In areas near northwestern Auburn, some Norma soils have an organic layer up to 1 foot thick. Permeability is moderately high and groundwater levels are commonly at or near the surface. The unit is characterized by a moderately high to high available water capacity, slow runoff, and slight erosion hazard (USDA 1973).

The geology underlying the Site consists of gravel and sand deposited during the Quaternary Period (less than 1.6 million years ago). This unit is part of the Frazier Glaciation, which represents the last glaciation event in south Puget Sound. Sediments of this unit consist of sand and gravel deposited by the White River and later reworked by the Green River (Mullineaux 1965).

A geologic cross section trending northwest to southeast through the Site is presented on Figure 6. The alignment of the geologic cross section is shown on Figure 5. Groundwater levels from the September 2017 groundwater sampling event are presented on the cross section and demonstrate the relatively flat horizontal groundwater gradient at the Site.

2.5 Site Hydrogeology

The groundwater flow regime is unconfined groundwater flow in porous media. Sandy silt and silty sand was primarily observed on the subject property from approximately 1 foot bgs to depths ranging from 6 to 10 feet bgs. During drilling and probing activities conducted at the Site, groundwater was generally encountered at depths from 4 to 6 feet bgs within the upper-most lithologic unit. Groundwater flow direction for the Site is predominately to the east-southeast, as indicated by groundwater contour maps and flow directions. A copy of the groundwater elevation maps from August 2013 to September 2017 are available in Attachment D.

The hydraulic gradient is relatively flat across most of the Site and generally ranges between 0.0009 and 0.0013 feet/foot. The Site's hydraulic conductivity is estimated to be between approximately 5×10^{-5} to 1×10^{-2} meters/second, and porosity is estimated to be between 25 to 50 percent. These estimated values are based on published ranges of values for medium sand (Freeze and Cherry 1979), which is the most common geologic material in the upper 15 feet and the Site. Shallow groundwater on-Site discharges to Mill Creek to the east. Conditional POC wells MW-3, MW-7, and MW-8 confirm that groundwater meets MTCA Method A CULs a significant distance before reaching the downgradient property boundary or Mill Creek. Mill Creek is approximately 560 feet southeast of MW-3, 415 feet southeast of MW-8 and 450 feet southeast of MW-7.

2.6 Sampling/Analytical Results

EPI's understanding of current subsurface conditions at the Site is based primarily on the results of the UST Assessment (Section 2.1.9) the Phase II ESA (Section 2.1.11) and ongoing quarterly groundwater monitoring at the Site (Section 2.2.1). The data generated by these investigations are described and evaluated in the following sections.

2.6.1 UST Assessment Results

Soil samples collected from sidewalls and the bottom of the excavation during UST decommissioning are summarized in Table 1. These data, and a visual inspection of the UST prior to its removal from the excavation, indicate that the UST did not leak and did not impact surrounding soil. Only one sample, from the west bottom of the excavation, had a detection of DRPH at a concentration of 230 mg/kg, which is an order of magnitude less than the MTCA Method A CUL of 2,000 mg/kg. Had the UST leaked, soil would have been impacted.

A release of UST rinse water that occurred during the decommissioning of the former 12,000 diesel fuel UST south of the truck maintenance building resulted in impacts to groundwater in the excavation and downgradient at MW-6. The single water sample collected during UST decommissioning was taken after the UST had upended and crashed into the bottom of the excavation, spilling an unknown volume of rinse water into the excavation. DRPH and HRPH data for the water sample from the excavation are summarized in Table 2. These data indicated DRPH impacts with a concentration of 55,000 µg/L, which is significantly greater than the MTCA Method A CUL of 500 µg/L. Although efforts were made to recover the spilled rinse water, concentrations of DRPH, commonly in the 600 to 1,000 µg/L range, remained in quarterly groundwater samples from downgradient well MW-6, which was installed in response to this release.

2.6.2 Phase II ESA Results

Following the rinse water release that occurred during the decommissioning of the former 12,000-gallon diesel fuel UST, Ecology required installation of two additional wells, MW-5, located at the southwest corner of the truck maintenance building, and MW-6, located immediately downgradient of the former 12,000-gallon UST (Figure 3). Ecology also required further groundwater and soil sampling in the areas around MW-1 and MW-6, which are the only two monitoring wells that commonly have DRPH or HRPH detections at concentrations greater than MTCA Method A CULs.

Five direct-push probes (DP-1 through DP-5) were installed in the area around MW-1 and four probes (DP-6 through DP-9) were installed downgradient of MW-6 at the locations shown on Figure 4. Soil samples were collected from soil at the top of the water table, the “smear zone,” at DP-1 through DP-5. Only one soil sample, DP-3 had detections of DRPH and HRPH at 180 and 280 mg/kg, respectively, as summarized in Table 3. Both concentrations are well below the MTCA Method A CUL of 2,000 mg/kg for DRPH and HRPH. The detections for DRPH and HRPH in the sample from DP-3 are likely from the edge of the petroleum-impacted soil remaining under the northwest corner of the truck maintenance building. Soil samples were not collected from probes DP-6 through DP-9 because the 12,000-gallon UST excavation sidewall samples were all non-detect and there was no reason to suspect that soil is impacted in this area.

Groundwater samples were collected from the upper few feet of the water table at all nine probe locations. Of the five sample locations around MW-1, DP-1 and DP-5 were non-detect or had detections at concentrations less than the MTCA Method A CULs. Samples from DP-2, DP-3, and DP-4 had detections of both DRPH and HRPH at concentrations greater than MTCA Method A CULs, as summarized in Table 4. The groundwater sample from DP-3 had the greatest concentrations of DRPH (66,000 µg/L) and HRPH (97,000 µg/L). As noted above, DP-3 is immediately adjacent to petroleum-impacted soil remaining beneath the truck maintenance building wall, indicating that the groundwater sample from DP-3 was likely impacted by the remaining impacted soil.

Only one of the four samples from probes downgradient of MW-6 had an exceedance of CULs. The sample from DP-8 had HRPH at a concentration of 730 µg/L, which is greater than the MTCA Method A CUL of 500 µg/L, as summarized in Table 4. However, out of 16 consecutive quarterly groundwater samples from MW-6, only 2 samples had low concentration detections of HRPH with the remaining 14 samples non-detect. This indicates that the minor HRPH exceedance in DP-8 is likely not related to the rinse water release from the former 12,000-gallon UST and that groundwater impacts noted in samples from MW-6 do not extend far downgradient of the former 12,000-gallon UST excavation.

Groundwater samples from the remaining probes near MW-6, specifically DP-5, DP-7, and DP-9, were non-detect for DRPH and HRPH; the sample from DP-6 had a DRPH concentration of 150 µg/L, which is less than the MTCA Method A CUL of 500 µg/L, and was non-detect for HRPH.

2.6.3 Quarterly Groundwater Monitoring

As of September 2017, EPI has performed 24 rounds of quarterly groundwater monitoring in the well network at the Site. Most quarterly sampling events include water level measurements and groundwater sampling; however, in August 2016 the property owner elected to install two Conditional POC monitoring wells, designated MW-7 and MW-8, at locations downgradient of MW-6 as shown on Figures 3, 4, and 5. The Conditional POC wells were placed at locations selected in coordination with Ecology to be downgradient of groundwater impacts associated with the former 12,000-gallon diesel fuel UST but upgradient of the property boundary to detect groundwater impacts (if present) before they migrate off-property.

In August 2016 Ecology also requested collection of groundwater and multi-level (5, 10, and 15 feet bgs) soil samples from two shallow soil borings (BH-1 and BH-2) drilled at locations at the eastern (downgradient) edge of the former 12,000-gallon diesel fuel UST excavation as shown on Figures 3, 4, and 5. Soil and groundwater data from the Conditional POC well boreholes and from BH-1 and BH-2 are summarized in Table 5. All soil samples were non-detect for both DRPH and HRPH, which is consistent with the mode of release that occurred during decommissioning of the former 12,000-gallon diesel UST. Groundwater grab samples from BH-1 and BH-2 were non-detect for HRPH; however, both had detections of DRPH at concentrations similar to the DRPH concentrations in samples from nearby well MW-6.

Groundwater data from the 24 rounds of quarterly monitoring are summarized in Table 6. GRPH and BTEX sampling was discontinued in November 2013 after nine consecutive rounds of non-detections in samples from all wells that were present at the time. Table 6 indicates that the only wells with ongoing impacts are MW-1 and MW-6. Wells MW-3, MW-4, and MW-5 have never had a CUL exceedance for DRPH or HRPH. MW-2 had a minor exceedance for HRPH in August 2012 but has been non-detect for HRPH since May 2013. Conditional POC wells MW-7 and MW-8 have detections of DRPH at low concentrations indicating that they are installed in the correct groundwater flow path downgradient of MW-6 and the former 12,000-gallon diesel fuel UST. Data from the Conditional POC wells demonstrates that impacted groundwater is not migrating off the property and is not a threat to downgradient receptors.

MW-9 is a special case in that it is installed approximately at the DP-3 location from the Phase II ESA and is immediately adjacent to petroleum-impacted soil remaining under the northwest corner wall of the truck maintenance building. Due to its location, next to a known area of impacted soil, samples from MW-9 are expected to have DRPH or HRPH at concentrations greater than MTCA Method A CULs. A comparison of the 4,300 µg/L µg/L detection of DRPH in MW-9 in September 2017 with the 66,000 µg/L and 97,000 µg/L detections for DRPH and HRPH, respectively, in the 2013 groundwater sample from

DP-3 indicates the effectiveness of the air injection groundwater remediation system described in Section 2.2.2.

3.0 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) was developed for the Site based on the data collected at the subject property. The CSM identifies current and potential future exposure pathways for human and ecological receptors. The CSM is presented as Attachment E.

Following the October-November 1998 remedial excavation of the 550-gallon waste oil UST, DRPH and HRPH compounds remain in shallow soil primarily under the northwest corner of the truck maintenance building foundation. Residual DRPH and HRPH are present in this area at concentrations that exceed their respective MTCA Method A Soil CULs for Unrestricted Land Uses, which are conservative values based on residential exposures and protection of groundwater.

HRPH was detected in the groundwater sample collected at MW-1 during the September 2017 groundwater sampling event at a concentration of 340 µg/L, which is less than the MTCA Method A CUL. HRPH was not detected in samples from any of the remaining wells. Samples from MW-3, MW-4, MW-5, MW-7, and MW-8 have never had a detection for HRPH. Only the sample from recently installed monitoring well MW-9 had a DRPH concertation that exceeded the MTCA Method A CUL. DRPH was detected in groundwater samples from the remaining wells at concentrations less than the MTCA Method A CUL.

The source of the impacts to Site soil and groundwater at and around MW-1 and MW-9 appears to be from subsurface releases of oil and petroleum hydrocarbons from the former 550-gallon waste oil UST. Most impacted soil was removed from the Site in 1998 during UST removal operations, and the lateral and vertical extents of remaining impacts appear to be very limited. Samples from downgradient wells MW-2, MW-3, MW-4, and MW-5 consistently meet MTCA Method A CULs for DRPH and HRPH.

The source of impacts to groundwater at and around MW-6 appears to be from the unintentional release of rinse water during decommissioning of the former 12,000-gallon diesel fuel UST in 2012. Soil samples from the UST excavation sidewalls and bottom, from boreholes BH-1 and BH-2, and from boreholes for Conditional POC wells MW-7 and MW-8 had no MTCA Method A CUL exceedances. These soil data support the mechanism of release identified above; if the UST had leaked prior to the unintentional release that occurred during decommissioning surrounding soil would have been impacted. The September 2017 groundwater sample from MW-6 did not exceed MTCA Method A CULs; likely because of improved operation of the air injection remediation system described in Section 2.2.2.

The environmental media of concern at the Site are soil and groundwater. Potential current or future exposure pathways to remaining DRPH and HRPH impacts include dermal, ingestion, and inhalation exposure by commercial workers during construction activities. Residential exposures are not reasonably possible given the current and likely future land use of the property, which will be limited to industrial or commercial uses by the amended environmental covenant.

4.0 PROPOSED CLEANUP STANDARDS

4.1 Cleanup Standards for Impacted Media

Cleanup standards consist of cleanup levels and the Conditional POC at which those levels must be met. Cleanup standards are used as the basis for developing remedial action objectives for a cleanup action.

Site CULs for affected media were evaluated in accordance with MTCA and take into consideration exposure pathways and receptors based on current and likely future uses of the Site. Because the Site is within a commercial/industrial setting developed with buildings, roads, and sidewalks, and the Site qualifies for a Terrestrial Ecological Evaluation (TEE) simplification outlined in Section 4.2, the only exposure pathways for human receptors have been taken into consideration. Based on current and future land uses, the only potential pathway for exposure to COCs at the subject property is direct contact (i.e., dermal and ingestion) by construction workers.

CULs under MTCA may be established under Method A, Method B, or Method C. Under WAC 173-340-704(1), MTCA Method A CULs are appropriate for use at sites where:

- Few hazardous substances have been detected;
- The Site is undergoing a routine cleanup action; and
- Numerical standards are available for applicable COCs and media of concern.

MTCA Method A CULs are appropriate for the Site because there are a limited number of COCs in soil and groundwater, all the cleanup alternatives considered in the FS are routine cleanup actions, and there are established MTCA CULs for the COCs in the affected media of concern.

4.2 Soil

The COCs and associated MTCA Method A CULs for soil at the Site are the following:

- DRPH – 2,000 mg/kg
- HRPH – 2,000 mg/kg

4.3 Groundwater

The COCs and associated MTCA Method A CULs for groundwater at the Site are the following:

- DRPH – 500 µg/L
- HRPH – 500 µg/L

4.4 Terrestrial Ecological Evaluation

In accordance with WAC 173-340-7490, a TEE was performed for the Site to determine if it poses a threat to the terrestrial environment. After reviewing the *TEE Process – Simplified Evaluation* form and completing Table 749-1 (Attachment F) it was determined that no further TEE evaluation is required. An evaluation of the Site and surrounding area indicates that substantial wildlife exposure is unlikely per TEE guidance. In addition, based on the current Site conditions, including ground coverage of asphalt, concrete and buildings, a potential exposure to soil biota, plants, and wildlife is unlikely.

Therefore, terrestrial ecological exposures do not require further consideration. The completed *TEE Process – Simplified Evaluation* form and Table 749-1 are provided in Attachment F.

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary and Conclusions

Historical investigations and current Site conditions indicate that one area of soil impacts and two areas of groundwater impacts remain on the Site. The area under the northwest corner of the truck maintenance building contains shallow soil impacted by petroleum hydrocarbons that could not be safely excavated and removed due to structural integrity concerns for the building. This small volume of inaccessible impacted soil causes impacts to groundwater in the surrounding area represented by MW-1 and MW-9.

Groundwater at MW-1 has achieved MTCA Method A CULs 11 of the 24 quarterly sampling events, including 9 of the 12 sampling events performed since operation of the air injection system was initiated in 2014, as shown in quarterly monitoring data in Table 6. The data meeting MTCA Method A CULs include quarterly events when the system was off due to mechanical failure. The September 2017 groundwater sample from MW-9, screened immediately adjacent to impacted soil under the truck maintenance building, indicates a two-orders-of-magnitude improvement in groundwater quality relative to the 2013 groundwater sample from co-located probe DP-3.

Recent improvements to the air injection system, particularly the replacement of air injection well AI-6 and use of a blower capable of sustained operation at lower than 208-volts have allowed continuous operation of the system. September 2017 was the first sampling event performed following completion of both system improvements. Groundwater samples from both MW-1 and MW-6 had DRPH and HRPH at concentrations less than MTCA Method A CULs.

Conditional POC wells MW-7 and MW-8 are located within the groundwater flow path passing through the former location of the 12,000-gallon diesel fuel UST and they have consistently yielded samples with DRPH and HRPH at concentrations less than MTCA Method A CULs. These data indicate the groundwater leaving the property is in compliance with MTCA Method A CULs and that Mill Creek is protected.

5.2 Recommendations

Based on the data evaluations presented above EPI recommends discontinuing operation of the air injection system at MW-1 and MW-6. The basis for this recommendation is that MTCA Method A CULs have been consistently met for at least five consecutive quarters in Conditional POC wells MW-3, MW-7, and MW-8. EPI requests an NFA determination from Ecology with no further remediation or monitoring based on those Conditional POC well data and other supporting factors described in Section 6.7.

6.0 FOCUSED FEASIBILITY STUDY

The purpose of an FS is to develop and evaluate cleanup alternatives for a Site and select a final cleanup action in accordance with WAC 173-340-350(8). The objective of a selected cleanup action is to protect human health and the environment and to meet the requirements of MTCA. Based on the limited list of COCs (i.e., DRPH and HRPH) and small area of impacts to soil or groundwater, a Focused Feasibility Study (FFS) is appropriate for this Site. This FFS evaluates and selects a proposed cleanup action that will serve as a final, permanent remedy for the Site.

6.1 Applicable Regulations

The work documented herein is intended to comply with the laws and regulations of the State of Washington. The work to be performed during implementation of the selected remedy will be performed under the VCP and will comply with MTCA (70.105D RCW) and its implementing regulations (WAC 173-340). Applicable or Relevant and Appropriate Requirements (ARARs) for the selected remedy will be MTCA, and all potential exposure pathways will be addressed. This RI/FFS/CAP contains a fully MTCA-compliant CUL development. Therefore, further consideration of ARARs is not warranted and MTCA has been selected as the regulation with primacy for this project.

6.2 Remedial Action Objectives

Remedial Action Objectives (RAOs) have been established for the Site to provide remedial alternatives that protect human health and the environment under the MTCA cleanup process (WAC 173-340-350). Based on the assessment of conditions at the Site and the applicable CULs presented in Sections 4.2 and 4.3, the RAOs for the Site have been established as follows:

- Prevent human exposure to soil and groundwater exhibiting concentrations of COCs greater than applicable CULs identified in Section 4.0.

- If feasible, reduce concentrations of COCs in soil to levels protective of human health and the environment and that are protective of groundwater quality.

- Reduce or maintain concentrations of COCs in groundwater to levels protective of human health and the environment at conditional POC monitoring wells MW-3, MW-7, and MW-8, which are downgradient of contaminant source areas at the Site.

The RAOs are of primary importance to the evaluation of the general response actions, technologies, process options, and cleanup action alternatives presented in this FFS.

6.3 Analysis of All Known, Available, and Reasonable Technologies (AKART)

Based on the physical and hydrogeologic conditions at the Site, the available remedial options are limited. Typically, general response actions that are applicable to most impacted sites include the following:

- No action
- Institutional control
- Monitored natural attenuation (MNA)
- Removal of all source material (impacted soil)
- *Ex situ* treatment
- *In situ* treatment

Potentially applicable technologies associated with these general response actions were identified and screened based on the Site COCs and affected media, and take into consideration the current and future use of the property. The remedial alternatives under evaluation herein are based on the response actions and applicable technologies, and are presented in Section 6.4 below.

6.4 Description of Remedial Alternatives

EPI evaluated the following remedial alternatives to address the impacts to soil and groundwater at the Site. This evaluation is based upon EPI's experience, best professional judgment, and the application of scientific principles to the known and available data.

The following three remedial alternatives were evaluated as part of this FFS:

- Alternative 1 – Institutional Controls
- Alternative 2 – Excavation of All Remaining Impacted Soil
- Alternative 3 – *In Situ* Treatment of Impacted Soil and Groundwater

All three remedial alternatives will protect human health and the environment given the current configuration and use of the Site, which is paved or covered by buildings. In addition, data from conditional POC wells consistently indicate potential downgradient receptors are protected under current conditions. Except for the potential for a small volume of petroleum-impacted soil under the northwest corner of the truck maintenance building, onsite soil meets MTCA Method A CULs. In addition, monitoring data demonstrate that the groundwater plume is stable or shrinking, and samples from monitoring wells MW-3, MW-4, MW-5, MW-7, and MW-8 have never had an exceedance of MTCA Method A CULs.

Until cleanup standards are achieved in soil and groundwater, the three evaluated remedial alternatives include the continuation of land use restrictions found in the existing Environmental Covenant (EC) for the property, dated 1999. The existing EC would be replaced by an EC completed in Ecology's current format. The EC that would be implemented for the Site imposes restrictions on the use of the affected portion of the land such that it cannot be redeveloped for residential purposes. Land use restrictions would remain in force until COC concentrations decrease to levels less than the applicable CULs in all impacted media and the EC is terminated. A draft EC for the Site is presented in Attachment G.

The remedial alternatives are intended to comply with MTCA cleanup standards under WAC 173-340-700 through WAC 173-340-760 although the time frame for achieving those cleanup standards varies as described in Section 6.6.7.

There is an existing compliance monitoring well network on the Site consisting of nine monitoring wells. The three remedial alternatives evaluated include or have included groundwater monitoring per WAC 173-340-410 and WAC 173-340-720 through WAC 173-340-760.

Descriptions of each of the alternatives are provided below.

6.4.1 Alternative 1 – Institutional Controls

This remedial alternative considers the fact that an air injection remediation system has already been successfully installed and operated at the contaminant source areas near MW-1 and MW-6 and that MTCA Method A CULs have been achieved and maintained in Conditional POC wells. Alternative 1 consists of implementing institutional controls in the form of an updated EC to limit exposures to remaining impacts. No additional excavation, remediation, or groundwater monitoring would be performed.

The EC will apply to the Site, as defined under MTCA, rather than the entire subject property due to the limited amount of contaminated soil left under the building foundation and defined area of historical groundwater impacts. The EC would also include deed notifications to inform future property owners of the presence of contaminants.

Quarterly monitoring has been conducted at the site and recent data demonstrate that concentrations of DRPH and HRPH in groundwater have been in compliance with MTCA Method A CULs at the Conditional POC wells MW-3, MW-7, and MW-8 for five or more consecutive quarters. The general scope of Alternative 1 would consist of the following tasks:

- Installation and operation of an air injection remediation system (already completed).
- Prepare an EC according to Ecology's template (see Attachment G);
- Implement the EC;

- Obtain an NFA determination from Ecology based upon this report; and
- Decommission onsite wells and remediation system upon receipt of the NFA.

6.4.2 Alternative 2 – Excavation of All Remaining Impacted Soil

This remedial alternative consists of excavation and off-Site disposal of potentially impacted soil that may exceed the CULs developed in Sections 4.2 and 4.3. Please note that impacted soil was previously removed from under the building to the extent practical considering the presence of building foundations. This remedial option will also address groundwater impacts at the Site, as it will serve to remove the source of dissolved COCs impacting MW-1 and MW-9. It is currently estimated that approximately 150 cubic yards of in-place soil exceed the CULs at the Site. For Alternative 2, remedial actions will consist of removal, off-site disposal, and replacement of approximately 150 cubic yards of petroleum-impacted soil. This estimated soil volume is based on an excavation approximately 35 feet long, 10 feet wide, and 10 feet deep plus a 10 percent contingency for additional PCS volume based on performance sampling results.

To implement this alternative, it is assumed that the existing building foundation will be properly shored and supported to allow for contaminated soil to be excavated under the building, which is not practical.

The general scope of Alternative 2 would consist of the following tasks:

- Prepare an EC according to Ecology's template (see Attachment G);
- Implement the EC;
- Prepare an Engineering Design Report and Work Plan;
- Prepare a Sampling and Analysis Plan (SAP) and Health and Safety Plan (HASP);
- Obtain appropriate construction permits;
- Prepare the Site with appropriate traffic control and public safety and security measures;
- Coordinate with the affected utility companies and the City of Auburn Public Works department for relocating affected utility lines out of the impacted zone;
- Excavate and dispose of 150 cubic yards of PCS;
- Sample and analyze excavated soil to document soil conditions for disposal;
- Sample and analyze soil from the limits of the excavation;
- Import, place, and compact clean backfill in the excavated area;

- Perform quarterly groundwater compliance monitoring and reporting to verify the effectiveness of the remedial alternative in addressing groundwater impacts. For cost estimating purposes assume three years of monitoring and reporting;

- Prepare a final Cleanup Action Report requesting an NFA determination from Ecology; and

- Decommission onsite wells and remediation system upon receipt of the NFA.

6.4.3 Alternative 3 – Continued Operation of *In Situ* Treatment of Impacted Soil and Groundwater

This remedial alternative consists of active groundwater remediation, and to a lesser degree soil remediation, using *in situ* treatment technologies near the area of remaining COCs that exceed the CULs. The purpose of the air injection wells and compressor system is to add DO to the groundwater and vadose zone soil to stimulate enhanced aerobic degradation of the COCs. The increased DO concentrations in groundwater and soil due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater. A layout for the existing air injection system is illustrated on Figure 5. Groundwater would be sampled on a quarterly basis to monitor for compliance with MTCA Method A CULs at conditional POC wells MW-3, MW-7, and MW-8 for four consecutive quarters, which has already been achieved. However, for cost estimating purposes for Alternative 3, operation of the air injection system with quarterly groundwater monitoring is assumed to continue for two years. Quarterly groundwater monitoring would be continued for an additional year with the system off to test for rebound. The EC would remain in effect until cleanup goals were achieved for all media.

The general scope of Alternative 3 would consist of the following tasks. Please note that tasks associated with air injection system installation have already been completed.

- Prepare an EC according to Ecology’s template (see Attachment G);

- Implement the EC;

- Prepare a SAP and HASP;

- Obtain construction permits for excavating air line trenches;

- Prepare the Site with appropriate traffic control and public safety and security measures;

- Drill and install air injection wells;

- Excavate air line trenches and install conveyance piping;

- Backfill trenches and restore the ground surface to pre-existing conditions;

- Procure and set up aboveground equipment, and connect air piping to equipment;

- Operate the air injection system until CULs are achieved. For cost estimating purposes assume two years of operation and quarterly groundwater monitoring;
- Perform rebound testing consisting of quarterly monitoring and reporting for one year;
- Prepare a final Cleanup Action Report requesting an NFA determination from Ecology; and
- Decommission onsite wells and remediation system upon receipt of the NFA.

6.5 MTCA Threshold Requirements

A selected cleanup action must satisfy the requirements of WAC 173-340-360(2). These requirements include both threshold requirements (WAC 173-340-360(2)(a)) and other requirements (WAC 173-340-360(2)(b)). The threshold requirements include:

- Protection of human health and the environment;
- Compliance with cleanup standards;
- Compliance with applicable state and federal laws; and
- Provisions for compliance monitoring.

Other requirements include:

- Use of permanent solutions to the maximum extent practicable;
- Provisions for a reasonable restoration time frame; and
- Consideration of public concerns.

6.6 Evaluation of Remedial Alternatives

This section presents an evaluation and comparison of the proposed remedial alternatives for selecting the preferred cleanup action for the Site. In accordance with MTCA, the alternatives are evaluated relative to the criteria and sub-criteria specified in WAC 173-340-360(3)(f) and WAC 173-340-360(4), which include the following:

- Protectiveness;
- Permanence;
- Effectiveness over the long term;
- Management of short-term risks;

- Technical and administrative implementability;
- Consideration of public concerns;
- Restoration time frame; and
- Cost.

Table 7 summarizes the remedial alternatives evaluation results presented below.

6.6.1 Protectiveness

Protectiveness is defined in WAC 173-340-360(3)(f)(i) as:

> *"Overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, time required to reduce risk at the facility and attain cleanup standards, on-site and off-site risks resulting from implementing the alternative, and improvement of the overall environmental quality."*

All remedial alternatives are protective of human health and the environment. Two of the alternatives actively remediate soil beneath the Site, while one alternative imposes restrictions to prevent exposures. Alternative 2 is most protective because it removes all impacted soils to the maximum extent practicable in the shortest amount of time. Alternative 3 is slightly less protective than Alternative 2 primarily because the *in situ* treatment will require more time to achieve compliance than removal and off-Site disposal. Alternative 1 is slightly less protective than Alternative 3 because it does not include continued operation of the air injection system with quarterly monitoring. However, data from conditional POC wells indicate that potential downgradient receptors are protected by Alternative 1.

Alternative 1 is assigned a score of 2.6, Alternative 2 is assigned a score of 3.9, and Alternative 3 is assigned a score of 3.6.

6.6.2 Permanence

Permanence is defined in WAC 173-340-360(3)(f)(ii) as:

> *"The degree to which the alternative permanently reduces the toxicity, mobility or volume of hazardous substances, including the adequacy of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment process, and the characteristics and improvement of the overall environmental quality."*

At the completion of remedial activities, Alternatives 2 and 3 will each result in a permanent solution. Alternative 1 would also be a permanent solution, but would have a lower degree of permanence during its implementation due to contamination remaining in place for a longer time frame.

Permanence includes the sub-criteria of reduction in toxicity, degree of irreversibility, and the type and character of the waste streams generated during treatment. Due to the soil waste stream that would be generated during excavation and disposal, Alternative 2 ranks slightly lower than Alternative 3 for this sub-criterion. While all technologies, if successfully implemented, would be permanent, the degree of certainty in the success of each technology varies due to the nature of the technologies.

Alternative 1 is assigned a score of 3.5, Alternative 2 is assigned a score of 3.0, and Alternative 3 is assigned a score of 3.3.

6.6.3 Effectiveness over the Long Term

Effectiveness over the long term is defined in WAC 173-340-360(3)(f)(iv) as:

> *"Long-term effectiveness includes the degree of certainty that the alternative will be successful, the reliability of the alternative during the period of time hazardous substances are expected to remain on-Site at concentrations that exceed cleanup levels, the magnitude of residual risk with the alternative in place, and the effectiveness of controls required to manage treatment residues or remaining wastes. The following types of cleanup action components may be used as a guide, in descending order, when assessing the relative degree of long-term effectiveness: Reuse or recycling; destruction or detoxification; immobilization or solidification; on-Site or off-site disposal in an engineered, lined and monitored facility; on-Site isolation or containment with attendant engineering controls; and institutional controls and monitoring."*

Alternatives 2 and 3 both have the intent and goal of meeting cleanup standards and protecting human health and the environment after completion of the remedial action, while Alternative 1 has the intent and goal of protecting human health and the environment during its implementation. There are varying levels of uncertainty and reliability associated with each technology throughout the process. Long-term effectiveness includes the sub-criteria of certainty, reliability, residual risk, and utilization of preferred remedies. Alternatives 2 and 3 are ranked higher for long-term effectiveness than Alternative 1 primarily due to their higher degree of certainty and general reliability associated with the technology used.

Alternative 1 is assigned a score of 2.6, Alternative 2 is assigned a score of 3.4, and Alternative 3 is assigned a score of 3.5.

6.6.4 Management of Short-Term Risks

Management of short-term risks is defined in WAC 173-340-360(3)(f)(v):

> *"The risk to human health and the environment associated with the alternative during construction and implementation, and the effectiveness of measures that will be taken to manage such risks."*

Each of the alternatives has manageable short-term risks and effective measures for mitigating those risks. Alternative 1 has been ranked the highest for this criterion because it does not involve any intrusive work and, therefore, little to no short-term risks. Alternative 2 has the highest level of short-term risk of the three alternatives due to the excavation work and shoring of the building foundation with the potential to permanently damage the structural integrity of the building. Alternative 3 has moderate risks associated with the drilling and trenching near buried utilities.

Alternative 1 is assigned a score of 5.0, Alternative 2 is assigned a score of 1.8, and Alternative 3 is assigned a score of 2.5.

6.6.5 Technical and Administrative Implementability

Technical and administrative implementability is defined in WAC 173-340-360(3)(f)(vi):

> *"Ability to be implemented including consideration of whether the alternative is technically possible, availability of necessary off-site facilities, services and materials, administrative and regulatory requirements, scheduling, size, complexity, monitoring requirements, access for construction operations and monitoring, and integration with existing facility operations and other current or potential remedial actions."*

This criterion includes the concepts of technical possibility, access, necessary resources, monitoring requirements, and integration into existing facility features. All alternatives are technically possible to implement, but primarily vary based on their overall complexity. Alternative 1 received the highest implementability score because it is the easiest to implement. Alternative 2 received the lowest score because it is the most complex alternative due to the necessary relocation, shoring and potentially difficult access and limited space for performing the excavation work.

Alternative 1 is assigned a score of 5.0, Alternative 2 is assigned a score of 1.6, and Alternative 3 is assigned a score of 2.7.

6.6.6 Consideration of Public Concerns

Consideration of public concerns is defined in WAC 173-340-360(3)(f)(vii):

> *"Whether the community has concerns regarding the alternative, and if so, the extent to which the alternative addresses those concerns. This process includes concerns from individuals, community groups, local governments, tribes, federal and state agencies, or any other organization that may have an interest in or knowledge of the site."*

Public concerns are expected to vary depending on the remedial action. There would likely be more significant concerns associated with Alternative 2 due to the need for shoring, increased traffic, construction noise, and the high potential for generating fugitive vapors and dust during excavation activities. Public concerns associated with Alternative 3 would not be as significant as those associated with Alternative 2, but would likely include concerns regarding drilling and trenching, and noise issues during construction and system operation. Alternative 1 would not have these concerns, but would likely have concerns associated with leaving a small volume of impacted soil in place under the northwest corner of the truck maintenance building and related issues involving potential future redevelopment.

Alternative 1 is assigned a score of 4.0, Alternative 2 is assigned a score of 2.0, and Alternative 3 is assigned a score of 3.0.

6.6.7 Restoration Time Frame

Restoration time frame (RTF) is evaluated using the following factors described in WAC 173-340-360(4)(b)(i through ix):

(i) Potential risks posed by the site to human health and the environment;

(ii) Practicability of achieving a shorter RTF;

(iii) Current use of the site;

(iv) Potential future use of the site;

(v) Availability of alternative water supplies;

(vi) Likely effectiveness and reliability of institutional controls;

(vii) Ability to monitor and control migration of hazardous substances from the site;

(viii) Toxicity of hazardous substances at the site; and

(ix) Natural processes that reduce concentrations of hazardous substances at the site.

Estimates of RTF are necessarily subjective. Each of the alternatives is assumed to provide a reasonable RTF, but more accurate estimates of *in situ* treatment effectiveness are premature without data regarding actual treatment effectiveness and response to the methods that will be used.

RTF was ranked based on the general aggressiveness of each of the remedial actions and perceived certainty associated with the action. Alternative 2 is judged to be the most aggressive based on the contaminant mass removed in the shortest period of time. Although Alternative 3 also removes contaminant mass, the certainty associated with its successful implementation and ability to achieve cleanup standards is perceived to be lower than that of Alternative 2. Alternative 1 would have a longer restoration time frame than the other alternatives due to discontinuing operation of the active remediation technology (air injection system).

Alternative 1 is assigned a score of 2.5, Alternative 2 is assigned a score of 4.0, and Alternative 3 is assigned a score of 3.5.

6.6.8 Cost

Cost is defined in WAC 173-340-360(3)(f)(iii) as:

> *"The cost to implement the alternative, including the cost of construction, the net present value of any long-term costs, and agency oversight costs that are cost recoverable. Long-term costs include operation and maintenance costs, monitoring costs, equipment replacement costs, and the cost of maintaining institutional controls. Cost estimates for treatment technologies shall describe pretreatment, analytical, labor, and waste management costs. The design life of the cleanup action shall be estimated and the cost of replacement or repair of major elements shall be included in the cost estimate."*

Order-of-magnitude remediation costs (e.g., ±30 to 50 percent) were estimated for each of the remedial alternatives based on the descriptions presented in Section 6.4 and associated assumptions, and without engineering design or contractor bidding. The order-of-magnitude remedial costs are based on typical costs for Washington State and the current knowledge of the Site and are outlined in Tables 8, 9, and 10 and summarized in the following table. The estimated costs for Alternative 3 do not include the capital costs associated with air injection system installation because the system was installed at the Site in 2014 and has been in operation since that time. These costs are for comparison purposes only and actual implementation costs will vary from those provided below. These estimated costs incorporate a variety of necessary assumptions and the validity of those assumptions cannot be fully known at this time.

Remedial Alternatives Cost Summary

Remedial Alternative	Order-of-Magnitude Remediation Cost Estimate
1. Institutional Controls with Conditional POC Wells	$ 32,000
2. Excavation of All Remaining Impacted Soil	$ 572,000
3. *In Situ* Treatment of Impacted Soil and Groundwater	$ 118,000

6.6.9 Disproportionate Cost Analysis

Under WAC 173-340-360(3)(e), a cleanup action shall not be considered practicable "if the incremental cost of the alternative over that of a lower cost alternative exceeds the incremental degree of benefits achieved by the alternative over that of the other lower cost alternative." The determination of practicability is made using an analysis of benefit versus cost. The DCA can be performed quantitatively using the judged scoring of the non-cost criteria as the net benefit.

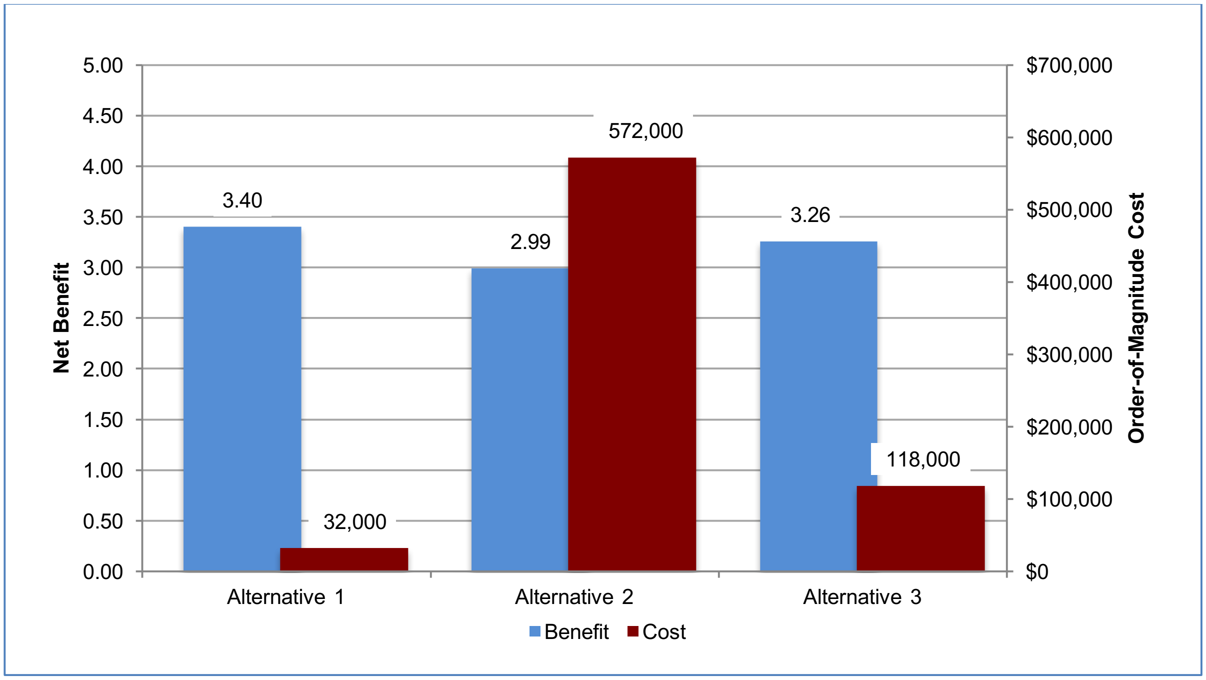
As previously discussed, each alternative was assigned a score for each of the non-cost evaluation criteria, with a score of 5 representing the highest overall perceived benefit and a score of 1 representing the lowest overall perceived benefit. The raw scores that were assigned in Sections 6.6.1 through 6.6.7 are summarized below and are weighted for each criterion according to weighting factors established by Ecology. The sum of the individual weighted scores for each alternative represents a value of the overall benefit of the alternative.

Table 2, and the summarized table and chart below present the DCA using the estimated order-of-magnitude costs and quantitative net benefit values.

Remedial Alternatives Scoring Summary

Factor	Weighting	Alternative 1		Alternative 2		Alternative 3	
		Rank	Value	Rank	Value	Rank	Value
Protectiveness	0.3	2.6	0.78	3.9	1.17	3.6	1.08
Permanence	0.2	3.5	0.70	3.0	0.60	3.3	0.66
Long-Term Effectiveness	0.2	2.6	0.52	3.4	0.68	3.5	0.70
Short-Term Risk	0.1	5.0	0.50	1.8	0.18	2.5	0.25
Implementability	0.1	5.0	0.50	1.6	0.16	2.7	0.27
Public Concerns	0.1	4.0	0.40	2.0	0.20	3.0	0.30
Weighted Sum	**1**	**3.40**		**2.99**		**3.26**	

Disproportionate Cost Analysis



6.7 Selected Cleanup Action

Based on the remedial alternatives evaluation, Alternative 1 ranks highest overall in raw scoring for the non-cost criteria (i.e., a total of 3.40 compared to scores of 2.99 and 3.26 for Alternatives 2 and 3, respectively).

Alternative 1, Institutional Controls, is the selected cleanup action. However, the name of this alternative does not capture and credit the remediation work that has already been performed at the Site. The air injection system described in Alternative 3 was installed near MW-1 in May 2014 and expanded to the area near MW-6 in April 2015. The system operated intermittently at first due to equipment failure, but those issues have been resolved and the system has been in continuous operation since June 2017 as described in Section 7.0.

Alternative 1, Institutional Controls, meets the MTCA criteria for selection of a remedial action at the Site. This approach complies with applicable regulations, is protective of human health and the environment, is practicable, and past and current operation of the existing air injection system has enhanced the rate of biodegradation to decease concentrations of Site COC’s to below MTCA Method A CULs in samples from MW-1 and MW-6.

Site-specific factors that support the conclusion that Alternative 1, Institutional Controls, is appropriate and protective of human health and the environment include:

- Prior removal of petroleum-impacted soil to the extent practical;

- Low mobility of DRPH and HRPH limits the downgradient movement of contaminants;

- Low groundwater flow velocity due to a flat hydraulic gradient at the Site further limits the downgradient movement of contaminants;

- The significant distance between conditional POC wells and the nearest potential receptor (Mill Creek), which is approximately 560 feet southeast of MW-3, 415 feet southeast of MW-8 and 450 feet southeast of MW-7.

- Significant decreases in COC concentrations in samples from MW-1 and MW-6 through past operation of the air injection remediation system, including meeting MTCA Method A CULs in samples from both wells in September 2017; and

- Conditional POC wells MW-3, MW-7, and MW-8 have at least five consecutive quarters (23 quarters for MW-3) of groundwater data and have never had exceedances of MTCA Method A CULs.

7.0 CLEANUP ACTION PLAN

The selected cleanup action, Institutional Controls, is appropriate because the air injection system used to promote enhanced aerobic degradation in Alternative 3, is already in place and has been operating at the Site. Therefore, this CAP presents a brief overview of the rational for Institutional Controls as the selected cleanup action, along with a summary of the operational history of the air injection system, procedures for continued operation of the system, and a proposed schedule for monitoring and reporting system performance.

As indicated above, Alternative 1, Institutional Controls, is the selected cleanup action for the Site. This selected cleanup action is appropriate because groundwater remediation as described for Alternative 3 has already been performed at the Site and five consecutive quarters of groundwater sample results from Conditional POC wells MW-3, MW-7, and MW-8 indicated that MTCA Method A CULs have been achieved through operation of the air injection system. Therefore, because successful operation of the air injection system was an important factor in making Alternative 1 an appropriate remedial selection for the Site, the rationale for installation, operation, and operational history of the air injection system are summarized in the following sections. EPI requests an NFA determination from Ecology with no further remediation or monitoring based on the Conditional POC well data and other supporting factors described in Section 6.0.

7.1 Rationale for Past Installation and Operation of the Air Injection System

Based on groundwater parameters during low-flow sampling, DO values were close to zero in onsite wells. Low DO values in groundwater create a less than ideal environment for biological activity that could metabolize and remediate petroleum hydrocarbons in the subsurface. The purpose of the air injection wells and compressor system was to add DO to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Because the air injection system is already in place and operating at the Site and MTCA Method A CULs have been achieved at Conditional POC wells, this Cleanup Action Plan is a brief overview of the operational history of the air injection system, including recommendations to discontinue operation of the system and discontinue quarterly groundwater monitoring.

7.2 Background and Operational History of the Air Injection System

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown on Figure 5. Each of the shallow air injection wells is equipped with a 1-foot length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15 feet bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH were not detected in the sample from MW-1. Based on the favorable result, the remediation system remained temporarily off at MW-1 from August 2014 to April 2015 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs and to provide data intended to demonstrate that contaminant concentration rebound was not occurring.

The positive response to operation of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 as shown on Figure 5. The three wells are constructed like the air injection wells at MW-1 and are equipped with 1-foot lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15 feet bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until June 2015 when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring compressor replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not running during the June 21, 2016 groundwater sampling event and inspection revealed that the compressor motor was damaged beyond repair due to overheating. Upon questioning on-Site workers, EPI was informed that the system had been off for several weeks prior to the sampling event. EPI has instructed the on-Site workers to immediately inform EPI or the property owner in the event of a system shut down in the future should one occur.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. This is significantly lower than the standard of 220 to 230 volts. Although the compressor motor was rated to operate down to 208 volts, it is likely that during certain times of the day in the industrial area at and near the Site, voltage fluctuations below 208 volts caused high amperage of the motor, resulting in excessive heat that eventually seized the motor.

In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt-specific motor. The compressor was started up on November 16, 2016 and flows to the air injection wells were established. The system was running before and after the December 20, 2016 groundwater sampling event. Sometime between the December 20, 2016 sampling event and a Site visit by EPI personnel on March 20, 2017, the air injection system shut down. On March 20, 2017, EPI personnel inspected the compressor and determined that the vanes were destroyed and needed to be replaced. The compressor repair work was completed under warranty at the manufacturer's facility.

The repaired compressor was reconnected and returned to service on June 19, 2017. Both areas of the air injection system MW-1 and MW-6, were back in operation following the completion of groundwater sampling on June 19, 2017.

Since installation in 2015, air injection well AI-6 located near monitoring well MW-6 consistently had little to no air flow. EPI tested, evaluated, and attempted to increase air flow through this point with no measurable improvement and determined that the well screen was plugged and unrepairable. On June 26, 2017 Holocene Drilling, under EPI direction, decommissioned AI-6 per Ecology requirements and replaced it with air injection well AI-6R. Additional information regarding replacement air injection well AI-6R is provided in Attachment B.

Concentrations of DRPH have been decreasing, most notably in MW-1, since the installation and startup of the air injection system in 2014. In September 2017, samples from both MW-1 and MW-6 met their applicable CULs. In addition, all three Conditional POC wells, MW-3, MW-7, and MW-8 have been in compliance with MTCA Method A CULs for 23 consecutive quarters for MW-3, and five consecutive quarters (since installation) for MW-7 and MW-8. Analytical results from the September 2017 groundwater sampling event are presented in Table 6.

8.0 LIMITATIONS

To the extent that preparation of this RI/FS/CAP required the application of best professional judgment and the application of scientific principles, certain results of this work were based on subjective interpretation. EPI makes no warranties, express or implied, including and without limitation warranties as to merchantability or fitness for a particular purpose. The information provided in this RI/FS/CAP is not to be construed as legal advice.

9.0 REFERENCES

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Tables

Table 1
DRPH and HRPH Soil Analytical Results (in mg/kg)
12,000-Gallon UST Assessment
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Sample Identification	Collection Date	Sample Depth (feet bgs)	Diesel-Range Petroleum Hydrocarbons[a]	Higher-Range Petroleum Hydrocarbons[a]
Stockpile 1	11/28/2012	NA	<50	<250
Stockpile 2	11/28/2012	NA	<50	<250
Stockpile 3	11/28/2012	NA	<50	<250
West End	11/28/2012	8	<50	<250
West Bottom	11/28/2012	11	**230**	<250
North Sidewall	11/28/2012	8	<50	<250
South Sidewall	11/28/2012	8	<50	<250
East Bottom	11/28/2012	11	<50	<250
East End	11/28/2012	8	<50	<250
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses[b]			**2,000**	**2,000**

Notes:
All results presented in milligrams/kilogram (mg/kg).
Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.
a Analyzed by NWTPH-Dx.
b Model Toxics Control Act (MTCA) Method A cleanup level from Table 740-1 in Washington Administrative Code
-- Indicates sample was not analyzed for this compound.
UST Underground storage tank.
bgs Below ground surface.
NA Not applicable.

Compounds:
DRPH Diesel-range petroleum hydrocarbons
HRPH Higher-range petroleum hydrocarbons

Table 2
DRPH and HRPH Groundwater Analytical Results (in µg/L)
12,000-Gallon UST Assessment
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Sample Identification	Collection Date	Diesel-Range Petroleum Hydrocarbons[a]	Higher-Range Petroleum Hydrocarbons[a]
UST 1 Water	11/28/2012	**55,000**	**790**
MTCA Method A Cleanup Levels for Groundwater[b]		**500**	**500**

Notes:

All results presented in micrograms/liter (µg/L).

Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.

a Analyzed by NWTPH-Dx.

b Model Toxics Control Act (MTCA) Method A cleanup level from Table 720-1 in Washington Administrative Code Chapter 173-340-900.

UST Underground storage tank.

Compounds:

DRPH Diesel-range petroleum hydrocarbons

HRPH Higher-range petroleum hydrocarbons

Table 3
DRPH and HRPH Soil Analytical Results (in mg/kg)
Phase II Environmental Site Assessment
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Sample Location	Sample Identification	Collection Date	Sample Depth (feet bgs)	Diesel-Range Petroleum Hydrocarbons[a]	Higher-Range Petroleum Hydrocarbons[a]
DP-1	EW-DP-1:8	10/22/2013	8	<25	<50
DP-2	EW-DP-2:7	10/22/2013	7	<29	<57
DP-3	EW-DP-3:7	10/22/2013	7	**180**	**280**
DP-4	EW-DP-4:7	10/22/2013	7	<25	<50
DP-5	EW-DP-5:8	10/22/2013	8	<27	<53
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses[b]				**2,000**	**2,000**

Notes:
All results presented in milligrams/kilogram (mg/kg).
Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.
a Analyzed by NWTPH-Dx.
b Model Toxics Control Act (MTCA) Method A cleanup level from Table 740-1 in Washington Administrative Code Chapter 173-340-900.
bgs Below ground surface.

Compounds:
DRPH Diesel-range petroleum hydrocarbons
HRPH Higher-range petroleum hydrocarbons

Table 4
DRPH and HRPH Groundwater Analytical Results (in µg/L)
Phase II Environmental Site Assessment
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Sample Location	Sample Identification	Collection Date	Diesel-Range Petroleum Hydrocarbons[a]	Higher-Range Petroleum Hydrocarbons[a]
DP-1	EW-DP-1	10/22/2013	**180**	<250
DP-2	EW-DP-2	10/22/2013	**760**	**1,100**
DP-3	EW-DP-3	10/22/2013	**66,000**	**97,000**
DP-4	EW-DP-4	10/22/2013	**1,100**	**2,400**
DP-5	EW-DP-5	10/22/2013	<130	<250
DP-6	EW-DP-6	10/22/2013	**150**	<250
DP-7	EW-DP-7	10/22/2013	<130	<250
DP-8	EW-DP-8	10/22/2013	**410**	**730**
DP-9	EW-DP-9	10/22/2013	<130	<250
MTCA Method A Cleanup Levels for Groundwater[b]			**500**	**500**

Notes:

All results presented in micrograms/liter (µg/L).

Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.

a Analyzed by NWTPH-Dx.

b Model Toxics Control Act (MTCA) Method A cleanup level from Table 720-1 in Washington Administrative Code Chapter 173-340-900.

Compounds:

DRPH Diesel-range petroleum hydrocarbons

HRPH Higher-range petroleum hydrocarbons

Table 5
DRPH and HRPH Analytical Results
Boring and Well Installation
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Sample Identification	Collection Date	Sample Depth (feet bgs)	Diesel-Range Petroleum Hydrocarbons[a]	Higher-Range Petroleum Hydrocarbons[a]
Soil Analytical Results (in mg/kg)[b]				
MW-7-S-5.5	8/26/2016	5.5	<50	<250
MW-8-S-5.5	8/26/2016	5.5	<50	<250
BH-1-S-5	8/26/2016	5	<50	<250
BH-1-S-10	8/26/2016	10	<50	<250
BH-1-S-15	8/26/2016	15	<50	<250
BH-2-S-5	8/26/2016	5	<50	<250
BH-2-S-10	8/26/2016	10	<50	<250
BH-2-S-15	8/26/2016	15	<50	<250
Groundwater Analytical Results (in µg/L)[c]				
BH-1-W-6.5	8/26/2016	5–15	**490**	<250
BH-2-W-6.8	8/26/2016	5–15	**1,000**	<250

Notes:

Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.

a Analyzed by NWTPH-Dx.

b Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses from Table 740-1 in Washington Administrative Code Chapter 173-340-900:
DRPH = 2,000 mg/kg
HRPH = 2,000 mg/kg

c Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater from Table 720-1 in Washington Administrative Code Chapter 173-340-900:
DRPH = 500 mg/kg
HRPH = 500 mg/kg

Compounds:

DRPH Diesel-range petroleum hydrocarbons
HRPH Higher-range petroleum hydrocarbons

Table 6
Quarterly Groundwater Monitoring Analytical Results (in µg/L)
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Well ID	Collection Date	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/2011	<100	<250	<500	<1	<1	<1	<3
	11/11/2011	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/2012	<100	**690**	<250	<1	<1	<1	<3
	5/17/2012	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/2012	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/2012	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/2013	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/2013	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/2013	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/2013	--	**1,400**	**400**	--	--	--	--
	2/20/2014	--	**700**	**280**	--	--	--	--
	5/15/2014	--	**940**	<250	--	--	--	--
	8/14/2014	--	<50	<250	--	--	--	--
	11/24/2014	--	**220**	<250	--	--	--	--
	3/31/2015	--	**340**	<250	--	--	--	--
	6/29/2015	--	**240**	<250	--	--	--	--
	9/28/2015	--	**700**	**290**	--	--	--	--
	3/3/2016	--	**220**	<250	--	--	--	--
	6/21/2016	--	**160**	<250	--	--	--	--
	9/16/2016	--	**580**	**420**	--	--	--	--
	12/20/2016	--	**190**	<250	--	--	--	--
	3/24/2017	--	**53**	<250	--	--	--	--
	6/19/2017	--	**310**	**560**	--	--	--	--
	9/5/2017	--	**340**	**340**	--	--	--	--
MW-2	8/12/2011	<100	<250	<500	<1	<1	<1	<3
	11/11/2011	<100	**500**	<250	<1	<1	<1	<3
	2/10/2012	<100	<50	<250	<1	<1	<1	<3
	5/17/2012	<100	<50	<250	<1	<1	<1	<3
	8/28/2012	<100	**470**	**730**	<1	<1	<1	<3
	11/15/2012	<100	**140**	<260	<1	<1	<1	<3
	2/14/2013	<100	**94**	**260**	<1	<1	<1	<3
	5/16/2013	<100	**77**	<250	<1	<1	<1	<3
	8/14/2013	<100	**280**	<250	<1	<1	<1	<3
	11/25/2013	--	**53**	<250	--	--	--	--
	2/20/2014	--	<50	<250	--	--	--	--
	5/15/2014	--	<50	<250	--	--	--	--
	8/14/2014	--	**100**	<250	--	--	--	--
	11/24/2014	--	<50	<250	--	--	--	--
	3/31/2015	--	**57**	<250	--	--	--	--
	6/29/2015	--	**97**	<250	--	--	--	--
	9/28/2015	--	**150**	<250	--	--	--	--
	3/3/2016	--	<50	<250	--	--	--	--
	6/21/2016	--	**86**	<250	--	--	--	--
	9/16/2016	--	**95**	<250	--	--	--	--
	12/20/2016	--	<50	<250	--	--	--	--
	6/19/2017	--	**61**	<250	--	--	--	--
	9/5/2017	--	**100**	<250	--	--	--	--
MW-3	8/12/2011	<100	<250	<500	<1	<1	<1	<3
	11/11/2011	<100	**65**	<250	<1	<1	<1	<3
	2/10/2012	<100	**100**	<250	<1	<1	<1	<3
	5/17/2012	<100	**53**	<250	<1	<1	<1	<3
	8/28/2012	<100	**130**	<250	<1	<1	<1	<3
	11/15/2012	<100	**120**	<280	<1	<1	<1	<3
	2/14/2013	<100	**150**	<250	<1	<1	<1	<3
	5/16/2013	<100	**200**	<250	<1	<1	<1	<3
	8/14/2013	<100	**140**	<250	<1	<1	<1	<3
	11/25/2013	--	**170**	<250	--	--	--	--
	2/20/2014	--	**160**	<250	--	--	--	--
	5/15/2014	--	**120**	<250	--	--	--	--
	8/14/2014	--	**140**	<250	--	--	--	--
	11/24/2014	--	**130**	<250	--	--	--	--
	3/31/2015	--	**220**	<250	--	--	--	--
	6/29/2015	--	**130**	<250	--	--	--	--
	9/28/2015	--	**110**	<250	--	--	--	--
	3/3/2016	--	**92**	<250	--	--	--	--
	6/21/2016	--	**85**	<250	--	--	--	--
	9/16/2016	--	**100**	<250	--	--	--	--
	12/20/2016	--	**99**	<250	--	--	--	--
	6/19/2017	--	**310**	<250	--	--	--	--
	9/5/2017	--	**210**	<250	--	--	--	--
MW-4	8/12/2011	<100	<250	<500	<1	<1	<1	<3
	11/11/2011	<100	**72**	<250	<1	<1	<1	<3
	2/10/2012	<100	**150**	<250	<1	<1	<1	<3
	5/17/2012	<100	**160**	<250	<1	<1	<1	<3
	8/28/2012	<100	**200**	<250	<1	<1	<1	<3

Table 6
Quarterly Groundwater Monitoring Analytical Results (in µg/L)
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Well ID	Collection Date	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4 (continued)	11/15/2012	<100	**220**	<250	<1	<1	<1	<3
	2/14/2013	<100	**220**	<250	<1	<1	<1	<3
	5/16/2013	<100	**210**	<250	<1	<1	<1	<3
	8/14/2013	<100	**200**	<250	<1	<1	<1	<3
	2/20/2014	--	**140**	<250	--	--	--	--
	5/15/2014	--	**140**	<250	--	--	--	--
	8/14/2014	--	**290**	<250	--	--	--	--
	11/24/2014	--	**290**	<250	--	--	--	--
	3/31/2015	--	**320**	<250	--	--	--	--
	6/29/2015	--	**240**	<250	--	--	--	--
	9/28/2015	--	**220**	<250	--	--	--	--
	3/3/2016	--	**130**	<250	--	--	--	--
	6/21/2016	--	**63**	<250	--	--	--	--
	9/29/2016	--	**68**	<250	--	--	--	--
	12/20/2016	--	**78**	<250	--	--	--	--
	3/24/2017	--	<50	<250	--	--	--	--
	6/19/2017	--	**110**	<250	--	--	--	--
	9/5/2017	--	**150**	<250	--	--	--	--
MW-5	6/5/2013	<100	**160**	<250	<1	<1	<1	<3
	8/14/2013	<100	**56**	<250	<1	<1	<1	<3
	11/24/2014	<100	<50	<250	--	--	--	--
	3/31/2015	--	**52**	<250	--	--	--	--
	6/29/2015	--	<50	<250	--	--	--	--
	9/28/2015	--	<50	<250	--	--	--	--
	3/3/2016	--	<50	<250	--	--	--	--
	6/21/2016	--	<50	<250	--	--	--	--
	9/16/2016	--	<50	<250	--	--	--	--
	12/20/2016	--	<50	<250	--	--	--	--
	6/19/2017	--	**55**	<250	--	--	--	--
	9/5/2017	--	**68**	<250	--	--	--	--
MW-6	6/5/2013	<100	**680**	<250	<1	<1	<1	<3
	8/14/2013	<100	**790**	<250	<1	<1	<1	<3
	2/20/2014	--	**740**	<250	--	--	--	--
	5/15/2014	--	**950**	<250	--	--	--	--
	8/14/2014	--	**1,200**	<250	--	--	--	--
	11/24/2014	--	**680**	<250	--	--	--	--
	3/31/2015	--	**750**	<250	--	--	--	--
	6/29/2015	--	**750**	<250	--	--	--	--
	9/28/2015	--	**610**	<250	--	--	--	--
	3/3/2016	--	**1,100**	**390**	--	--	--	--
	6/21/2016	--	**650**	<250	--	--	--	--
	9/16/2016	--	**340**	<250	--	--	--	--
	12/20/2016	--	**640**	<250	--	--	--	--
	3/24/2017	--	**580**	<250	--	--	--	--
	6/19/2017	--	**970**	**280**	--	--	--	--
	9/5/2017	--	**320**	<250	--	--	--	--
MW-7	9/16/2016	--	**140**	<250	--	--	--	--
	12/20/2016	--	**78**	<250	--	--	--	--
	3/24/2017	--	<50	<250	--	--	--	--
	6/19/2017	--	**100**	<250	--	--	--	--
	9/5/2017	--	**59**	<250	--	--	--	--
MW-8	10/3/2016	--	**290**	<250	--	--	--	--
	12/20/2016	--	**140**	<250	--	--	--	--
	3/24/2017	--	<50	<250	--	--	--	--
	6/26/2017	--	**180**	<250	--	--	--	--
	9/5/2017	--	**160**	<250	--	--	--	--
MW-9	9/5/2017	--	**4,300**	<250	--	--	--	--
MTCA Method A Cleanup Levels for Groundwater[d]		**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

Notes:

All results presented in micrograms/liter (µg/L).

Bold Bold results indicate that the compound was detected at a concentration greater than the method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.

a Analyzed by NWTPH-Gx.

b Analyzed by NWTPH-Dx.

c Analyzed by EPA Method 8021B.

d Model Toxics Control Act (MTCA) Method A cleanup level from Table 720-1 in Washington Administrative Code Chapter 173-340-900.

e Cleanup level is 800 µg/L when benzene is present and 1,000 µg/L when benzen is not present.

-- Indicates sample was not analyzed for this compound.

Compounds:

GRPH Gasoline-range petroleum hydrocarbons

DRPH Diesel-range petroleum hydrocarbons

HRPH Higher-range petroleum hydrocarbons

Table 7
Remedial Alternatives Evaluation
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

	Alternative 1		Alternative 2		Alternative 3	
Criteria	**Institutional Controls**	***Score*** [a]	**Excavation of Remaining Impacted Soil**	***Score*** [a]	***In Situ*** **Treatment of Impacted Soil and Groundwater**	***Score*** [a]
Description/Issues	Implement institutional controls to place a deed restriction on the impacted property. This would not require any intrusive work at the Site.		Excavate all remaining impacted soil and transport to an offsite facility for disposal; perform eight quarters of groundwater compliance monitoring. Will require temporary shoring of maintenance building foundation for on-site personnel safety and building stability.		The purpose of the air injection wells and compressor system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.	
Protectiveness	Overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, time required to reduce risk at the facility and attain cleanup standards, on-site and off-site risks resulting from implementing the alternative, and improvement of the overall environmental quality.					
Overall protectiveness	*Protective if maintained*	*2.5*	*Protective when complete*	*4.5*	*Protective when complete*	*3.5*
Reduces existing risks	*Reduces risks when implemented*	*3*	*Reduces risks when implemented*	*4*	*Reduces risks when implemented*	*4*
Time required to reduce risk	*Longer duration to reduce risks*	*2*	*Shortest duration to reduce risks*	*4*	*Moderate duration to reduce risks*	*3*
On-Site risks	*Reduces risks with lower level of certainty*	*2.5*	*Reduces risks with high level of certainty*	*4*	*Reduces risks with moderate to high level of certainty*	*3.5*
Off-Site risks	*Reduces risks with moderate to high level of certainty*	*3.5*	*Reduces risks with moderate to high level of certainty*	*3.5*	*Reduces risks with moderate to high level of certainty*	*3.5*
Improvement in environmental quality	*No immediate change in environmental quality*	*2*	*Moderate to high level of improvement*	*3.5*	*High level of improvement*	*4*
Criterion Score		***2.6***		***3.9***		***3.6***
Permanence	The degree to which the alternative permanently reduces the toxicity, mobility or volume of hazardous substances, including the adequacy of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment process, and the characteristics and improvement of the overall environmental quality.					
Reduces toxicity, mobility, and volume	*Reduces toxicity, mobility, and volume slowly*	*2*	*Reduces toxicity, mobility, and volume rapidly*	*4*	*Reduces toxicity, mobility and volume moderately*	*3*
Degree of irreversibility	*Moderately irreversible*	*3.5*	*Irreversible*	*4*	*Irreversible*	*4*
Waste characteristics	*No waste stream generated*	*5*	*Generates contaminated soil and IDW waste stream*	*1*	*IDW waste stream*	*3*
Criterion Score		***3.5***		***3.0***		***3.3***
Long-Term Effectiveness	Long-term effectiveness includes the degree of certainty that the alternative will be successful, the reliability of the alternative during the period of time hazardous substances are expected to remain on-site at concentrations that exceed cleanup levels, the magnitude of residual risk with the alternative in place, and the effectiveness of controls required to manage treatment residues or remaining wastes. The following types of cleanup action components may be used as a guide, in descending order, when assessing the relative degree of long-term effectiveness: Reuse or recycling; destruction or detoxification; immobilization or solidification; on-site or off-site disposal in an engineered, lined and monitored facility; on-site isolation or containment with attendant engineering controls; and institutional controls and monitoring.					
Degree of Certainty	*Moderately certain*	*2.5*	*Moderately to highly certain*	*4*	*Moderately to highly certain*	*3.5*
Reliability	*Moderately to highly reliable*	*3.5*	*Highly reliable*	*4.5*	*Moderately to highly reliable*	*4*
Residual Risk	*Moderate*	*2.5*	*Low to moderate*	*3.5*	*Low to moderate*	*3.5*
Technology hierarchy	*Low*	*2*	*Low rank due to offsite soil disposal*	*1.5*	*Moderate to high*	*3*
Criterion Score		***2.6***		***3.4***		***3.5***
Short-Term Risk Management	The risk to human health and the environment associated with the alternative during construction and implementation, and the effectiveness of measures that will be taken to manage such risks.					
During construction and implementation	*Low risks*	*5*	*High risks associated with excavation and moving of utilities*	*1*	*Low to moderate risks associated with drilling and trenching near buried utilities*	*2*
Effectiveness of risk management	*Very effective*	*5*	*Moderately effective*	*2.5*	*Moderately effective*	*3*
Criterion Score		***5.0***		***1.8***		***2.5***

Table 7
Remedial Alternatives Evaluation
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

	Alternative 1		**Alternative 2**		**Alternative 3**	
Criteria	**Institutional Controls**	***Score***[a]	**Excavation of Remaining Impacted Soil**	***Score***[a]	***In Situ* Treatment of Impacted Soil and Groundwater**	***Score***[a]
Description/Issues	Implement institutional controls to place a deed restriction on the impacted property. This would not require any intrusive work at the Site.		Excavate all remaining impacted soil and transport to an offsite facility for disposal; perform eight quarters of groundwater compliance monitoring. Will require temporary shoring of maintenance building foundation for on-site personnel safety and building stability.		The purpose of the air injection wells and compressor system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.	
Implementability	Ability to be implemented including consideration of whether the alternative is technically possible, availability of necessary off-site facilities, services and materials, administrative and regulatory requirements, scheduling, size, complexity, monitoring requirements, access for construction operations and monitoring, and integration with existing facility operations and other current or potential remedial actions.					
Technically possible	*Possible if all affected property owners (Meeker Square property owner and City of Kent) agree to environmental covenant.*	5	*Possible if shoring can be done to stabilize maintenance building*	2	*Possible, based on subsurface data; SVE parameters should be evaluated*	2.5
Access	*No issues related to access for implementing deed restrictions.*	5	*Access might be an issues if shoring is compromized during excavation*	1	*Access for construction will be dependent on available space within the parking lot and the adjacent public right-of-way.*	2.5
Availability of necessary resources	*Readily available*	5	*Moderately available, speciality services with limited qualified contractors*	2.5	*Moderately available, speciality services with limited qualified contractors*	3
Scheduling, size, and complexity	*Very low complexity; environmental covenant can be prepared within 1 to 2 weeks.*	5	*High complexity and size due to necessary shoring of building foudnatoins and the safety percautions that come with that style of work*	1	*Moderate complexity and size; SVE installation and startup can be completed within 4 to 6 weeks; SVE operation may require an air discharge permit.*	3
Monitoring requirements	*None*	5	*Low to moderate*	2	*Moderate*	2.5
Integration with existing features	*High*	5	*Low due to temporary rerouting of buried utilities*	1	*Moderate. Will require a small portion of the subject property for installation of aboveground equipment.*	2.5
Criterion Score		***5.0***		***1.6***		***2.7***
Public Concerns	Whether the community has concerns regarding the alternative and, if so, the extent to which the alternative addresses those concerns. This process includes concerns from individuals, community groups, local governments, tribes, federal and state agencies, or any other organization that may have an interest in or knowledge of the Site.					
Concerns	*Potential concerns regarding impacts remaining in soil and groundwater.*	***4.0***	*Potential concerns regarding temporary shoring of building foundation, noise, excavation work, confined space work, hazards associated with trench collapse and building settling over time.*	***2.0***	*Potential concerns regarding drilling and trenching in close proximity to buried utilities, vapor discharges, noise issues, and partial use of the property for placement of system equipment.*	***3.0***
Restoration Time Frame	Determination of whether a cleanup action provides for a reasonable restoration time frame based on criteria in WAC 173-340-360(4)(b).					
Time Frame	*Moderate time frame*	***1.0***	*Shorter time frame*	***4.0***	*Moderate to shorter time frame*	***3.5***
TOTAL SCORE	***23.7***		***19.6***		***22.1***	
Conceptual Level Cost	**$32,000**		**$571,800**		**$118,040**	

Note:
a Each sub-criterion is scored from 5 (best) to 1 (worst) based on the perceived benefit; the total criterion score is the average of the associated sub-criterion scores.

Table 8
Order-of-Magnitude Cost Estimate
Alternative 1 – Institutional Controls
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Task Component	Units	Basis	Unit Cost	Subtotal	Professional Labor	Component Subtotal	Task Subtotal
Implement Institutional Controls							
Preparation of Environmental Covenant	1	LS			$ 6,000	$ 6,000	
Coordination with Agencies and Property Owners	1	LS			$ 5,000	$ 5,000	
Cleanup Action Report	1	LS			$ 10,000	$ 10,000	
Administrative Maintenance	1	LS			$ 1,000	$ 1,000	***$ 22,000***
Site Restoration and Closure							
Well Decomissioning (6 Air Injection, 9 Monitoring Wells)	15	well	$ 250	$ 3,750	$ 2,250	$ 6,000	
Equipment/Enclosure Decommissioning	1	LS	$ 2,500	$ 2,500	$ 1,500	$ 4,000	
Site Restoration and Closure Subtotal						$ 10,000	
							$ 10,000
PROJECT TOTAL							**$ 32,000**

Notes:
LS Lump sum

Table 9
Order-of-Magnitude Cost Estimate
Alternative 2 – Excavation
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Task / Component	Units	Basis	Unit Cost	Subtotal	Professional Labor	Component Subtotal	Task Subtotal
Implement Institutional Controls							
Preparation of Environmental Covenant	1	LS			$ 6,000	$ 6,000	
Coordination with Agencies and Property Owners	1	LS			$ 5,000	$ 5,000	
Administrative Maintenance	1	LS			$ 1,000	$ 1,000	***$ 12,000***
Pre-Remedial Activities							
Engineering Design Report and Work Plan	1	LS			$ 30,000	$ 30,000	
Grading & Construction Permit	1	LS	$ 5,000	$ 5,000	$ 3,500	$ 8,500	
Bid Solicitation	1	LS			$ 5,000	$ 5,000	
Contracting	1	LS			$ 5,000	$ 5,000	***$ 48,500***
Excavation and Soil Disposal							
Site Preparations/Shoring	1	LS	$ 50,000	$ 50,000	$ 5,000	$ 55,000	
Sawcut/Remove/Recycle Pavement	450	SF	$ 2	$ 900	$ 2,000	$ 2,900	
Excavate, Load, and Transport Impacted Soil Off-site	150	CY	$ 80	$ 12,000	$ 20,000	$ 32,000	
Waste Disposal Profiling and Sampling	1	LS	$ 1,000	$ 1,000	$ 2,500	$ 3,500	
Offsite Disposal of Impacted Soil	225	ton	$ 50	$ 11,250	$ 3,000	$ 14,250	
Confirmation Soil Sampling & Analysis	30	sample	$ 75	$ 2,250	$ 10,000	$ 12,250	
Backfill and Site Restoration							
Backfill with CDF	150	CY	$ 80	$ 12,000	$ 3,000	$ 15,000	
Restore Building Foundation	1	LS	$ 120,000	$ 120,000	$ 5,000	$ 125,000	
Restore Affected Landscaping and Pavement	1	LS	$ 5,000	$ 5,000	$ 1,000	$ 6,000	
Category Subtotals				*$ 214,400*	*$ 51,500*	*$ 265,900*	
Tax on Contractor Services/Capital Equipment (10%)				$ 21,400		$ 21,400	
Project Contingency (50% of Subtotal)						$ 143,700	
							$ 431,000
Groundwater Compliance Monitoring (assume 3 years)							
Groundwater Sampling Labor, Equipment, & Expenses	4	quarter	$ 2,000		$ 8,000	$ 8,000	
Groundwater Analyses (20 samples/year over 3 years)	20	sample	$ 60	$ 1,200		$ 1,200	
Quarterly Reporting	4	quarter	$ 3,500		$ 14,000	$ 14,000	
Net Present Value (3 years, 7% discount)[a]						*$ 36,700*	***$ 59,900***
Site Restoration and Closure							
Well Decomissioning (6 Air Injection, 9 Monitoring Wells)	15	well	$ 250	$ 3,750	$ 2,250	$ 6,000	
Equipment/Enclosure Decommissioning	1	LS	$ 2,500	$ 2,500	$ 1,500	$ 4,000	
Cleanup Action Report	1	LS	$ 15,000		$ 15,000	$ 15,000	
Site Restoration and Closure Subtotal						$ 25,000	
Net Present Value (year 3, 7% discount)[a]						*$ 20,400*	***$ 20,400***
PROJECT TOTAL							**$ 571,800**

Notes:

LS Lump sum
SF Square feet
CY Cubic yards

[a]Net Present Value based on Annual or Multi-Year Discount Factors published in *Guide to Developing and Documenting Cost Estimates During the Feasibility Study*

- Annual Discount Factor at 7% = 1÷1.07t, where t = year that future cost is incurred.
- Multi-Year Discount Factor at 7% = [1.07n-1]÷[0.7(1.07)n], where n = number of years that future costs are incurred.

Table 10
Order-of-Magnitude Cost Estimate
Alternative 3 – *In Situ* Treatment
Remedial Investigation / Focused Feasibility Study / Cleanup Action Plan
Provisioners Express (a.k.a. Estes West)
2102 West Valley Highway North, Auburn, Washington

Task	Component	Units	Basis	Unit Cost	Subtotal	Professional Labor	Component Subtotal	Task Subtotal
Implement Institutional Controls								
	Preparation of Environmental Covenant	1	LS			$ 6,000	$ 6,000	
	Coordination with Agencies and Property Owners	1	LS			$ 5,000	$ 5,000	
	Administrative Maintenance	1	LS			$ 1,000	$ 1,000	***$ 12,000***
Pre-Remedial Activities								
	Remediation System Design		LS			$ 3,000	$ 3,000	
	Bid Solicitation		LS			$ 2,500	$ 2,500	
	Contracting		LS			$ 1,500	$ 1,500	
								$ 7,000
Air Injection Treatment System (Capital Cost)								
	Site Preparations	1	LS	$ 1,000	$ 1,000	$ 3,000	$ 4,000	
	Air Injection Well Installation (2" PVC to 15 ft bgs, HSA)	6	each	$ 1,500	$ 9,000	$ 20,000	$ 29,000	
	Air Injection Wellhead Connections/Vaults	6	each	$ 400	$ 2,400	$ 1,000	$ 3,400	
	Trenching & Installation of SVE Conveyance Piping	100	LF	$ 50	$ 5,000	$ 2,500	$ 7,500	
	Drill Cuttings Disposal	6	drum	$ 200	$ 1,200	$ 1,000	$ 2,200	
	Air Compressor and Sound Enclosure	1	LS	$ 2,800	$ 2,800	$ 500	$ 3,300	
	Miscellaneous Plumbing/Piping	100	LF	$ 25	$ 2,500	$ 1,000	$ 3,500	
	Instrumentation	1	LS	$ 1,000	$ 1,000	$ 1,000	$ 2,000	
	Site Restoration and Demobilization	1	LS	$ 2,500	$ 2,500	$ 1,000	$ 3,500	
	System Startup/Initial Monitoring (10 weeks)	1	LS			$ 7,500	$ 7,500	
	Category Subtotals				*$ 27,400*	*$ 38,500*	*$ 65,900*	
	Tax on Contractor Services/Capital Equipment (10%)				$ 2,700		$ 2,700	
								Already Completed
Air Injection System Operation and Maintenance (O&M)								
	Annual System O&M (2 Years)							
	Electrical Usage	24	months	$ 85	$ 2,040		$ 2,040	
	Site Visits (Quarterly)	8	visits	$ 700		$ 5,600	$ 5,600	
	O&M Subtotal (2 years)						$ 7,640	
	Periodic O&M Costs							
	Other Equipment Maintenance or Repair	1	LS	$ 3,500	$ 3,500	$ 2,000	$ 5,500	
								$ 13,140
Performance and Compliance Monitoring/Sampling								
	Annual Groundwater Monitoring (3 Years)							
	Sampling Labor and Equipment	4	quarters	$ 2,000		$ 8,000	$ 8,000	
	Groundwater Analyses (20 samples/year over 3 years)	20	sample	$ 60	$ 1,200		$ 1,200	
	Reporting	4	each	$ 3,500		$ 14,000	$ 14,000	
	Annual Groundwater Monitoring Subtotal						$ 23,200	
	Net Present Value (3 years, 7% discount)[a]						*$ 60,900*	***$ 60,900***
Site Restoration and Closure								
	Well Decomissioning (6 Air Injection, 9 Monitoring Wells)	15	well	$ 250	$ 3,750	$ 2,250	$ 6,000	
	Equipment/Enclosure Decommissioning	1	LS	$ 2,500	$ 2,500	$ 1,500	$ 4,000	
	Cleanup Action Report	1	LS	$ 15,000		$ 15,000	$ 15,000	
	Site Restoration and Closure Subtotal						$ 25,000	
	Net Present Value (year 3, 7% discount)[a]						*$ 20,400*	***$ 25,000***
PROJECT TOTAL								**$ 118,040**

Notes:
ft bgs Feet below ground surface
LF Linear feet
LS Lump sum
PVC Polyvinyl chloride

Figures

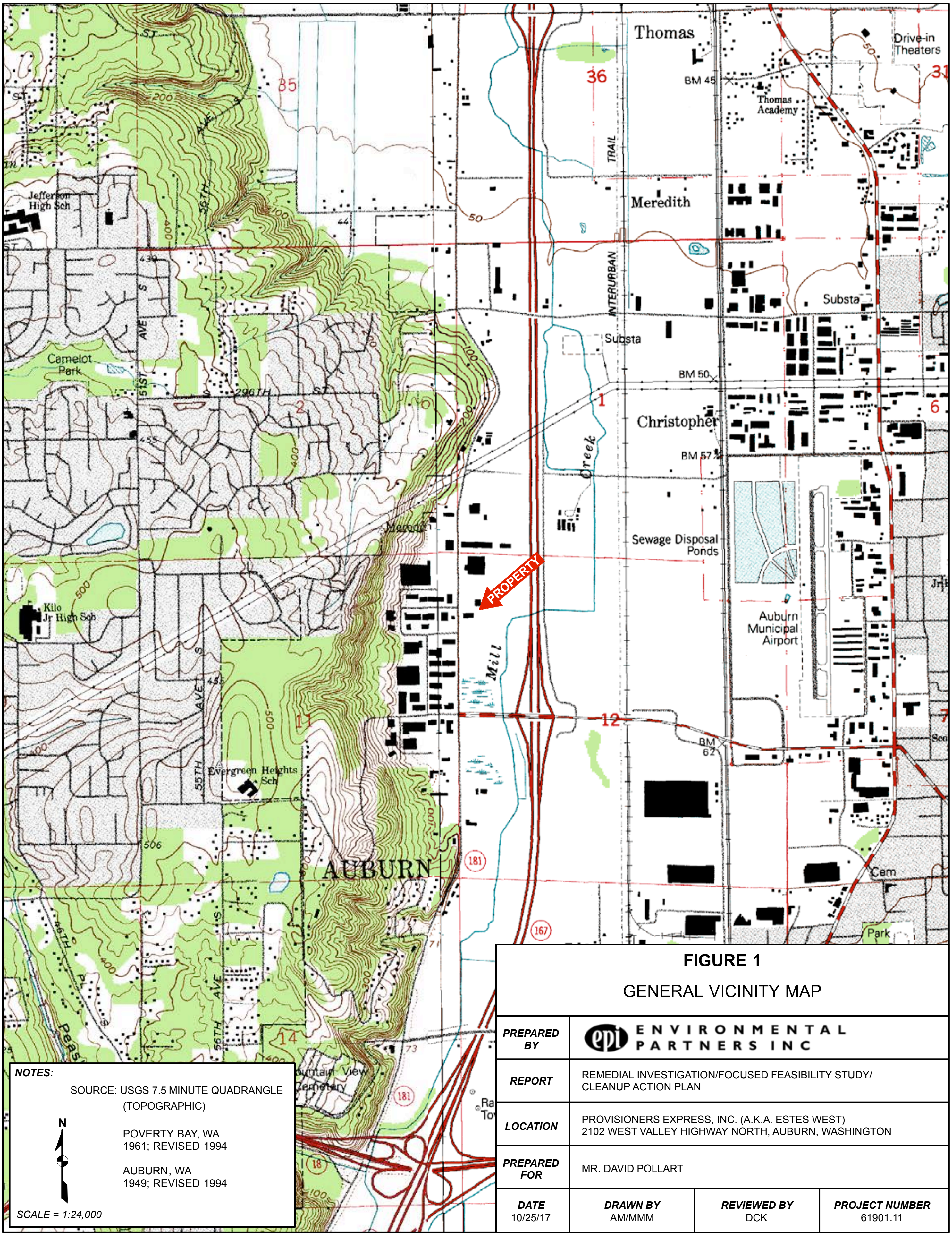

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN
LOCATION	PROVISIONERS EXPRESS, INC. (A.K.A. ESTES WEST) 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
10/25/17	AM/MMM	DCK	61901.11

NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

N

SCALE = 1:24,000

NOTES:

2017 AERIAL PHOTOGRAPH FROM BING.COM MAPS

———— — —	APPROXIMATE PROPERTY BOUNDARY
▬▬ ▬ ▬	APPROXIMATE SITE BOUNDARY
MTCA	MODEL TOXICS CONTROL ACT

FIGURE 2

PROPERTY AND MTCA SITE BOUNDARIES

PREPARED BY	ENVIRONMENTAL PARTNERS INC
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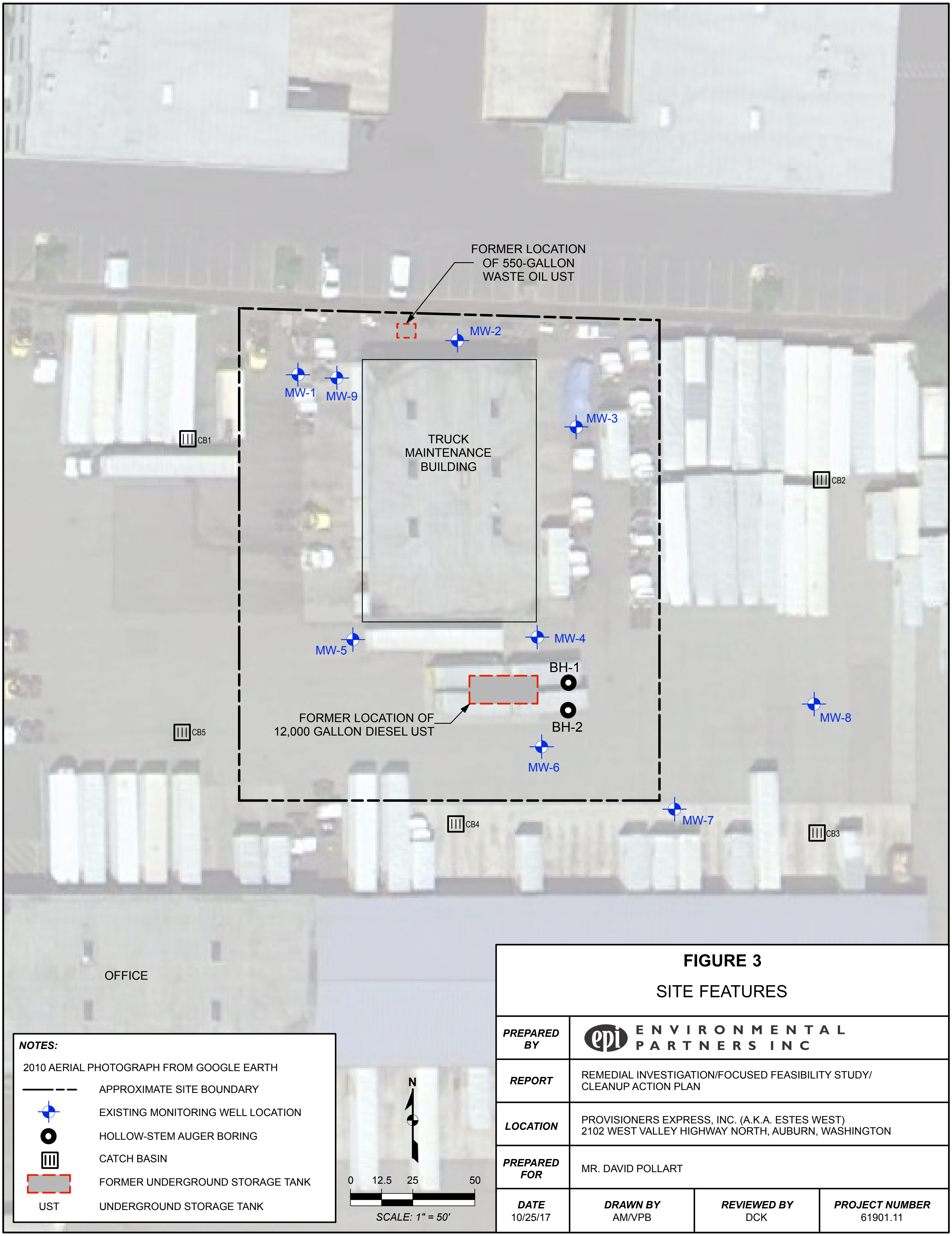

NOTES:

2010 AERIAL PHOTOGRAPH FROM GOOGLE EARTH

	APPROXIMATE SITE BOUNDARY
	EXISTING MONITORING WELL LOCATION
	HOLLOW-STEM AUGER BORING
	CATCH BASIN
	FORMER UNDERGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK

FIGURE 3

SITE FEATURES

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN		
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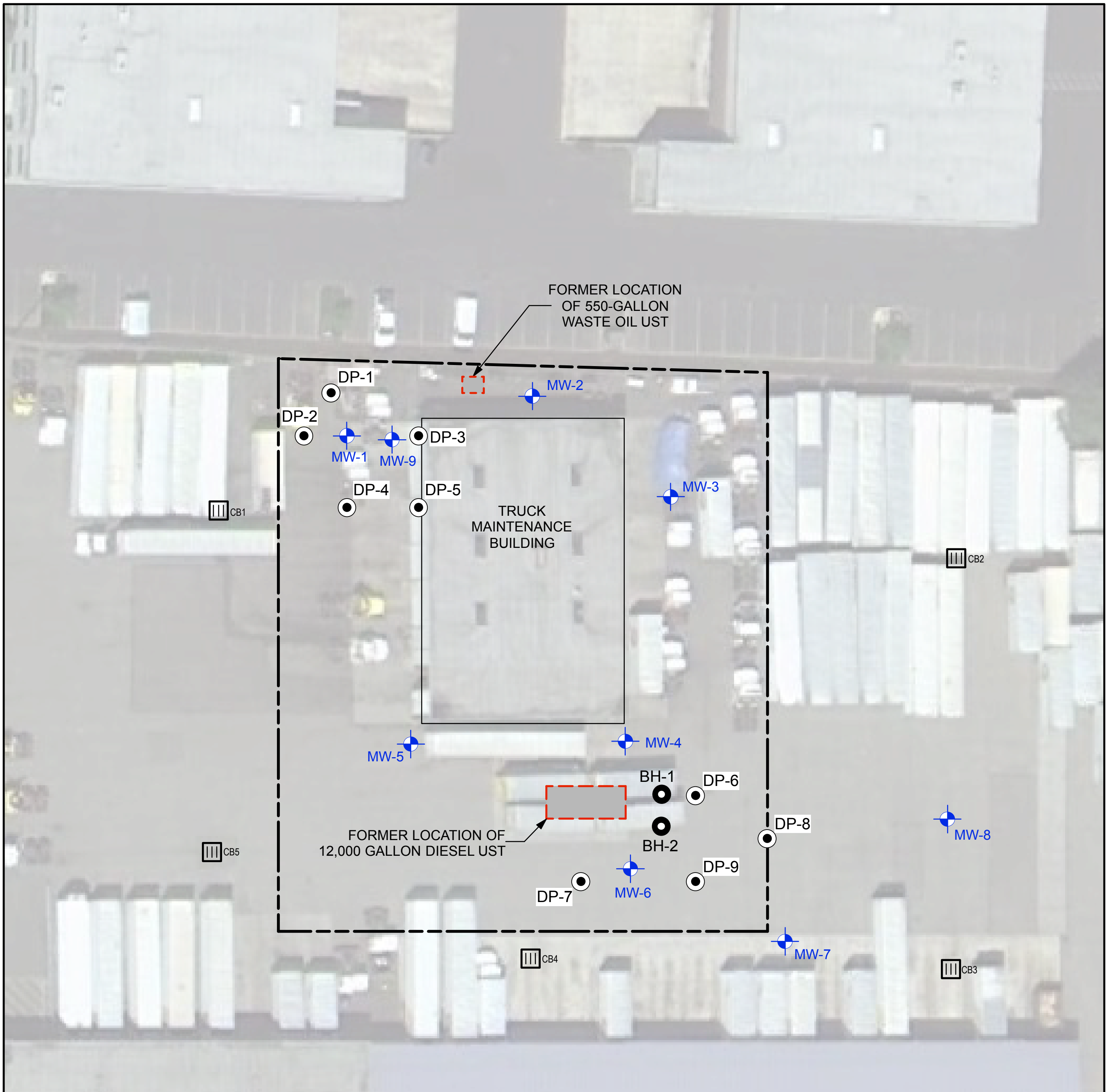
PREPARED FOR	MR. DAVID POLLART		
DATE 10/25/17	***DRAWN BY*** AM/VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.11



NOTES:

2010 AERIAL PHOTOGRAPH FROM GOOGLE EARTH

	APPROXIMATE SITE BOUNDARY
	EXISTING MONITORING WELL LOCATION
	HOLLOW-STEM AUGER BORING
	DIRECT PUSH PROBE LOCATION
	CATCH BASIN
	FORMER UNDERGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
ESA	ENVIRONMENTAL SITE ASSESSMENT

N

0 12.5 25 50

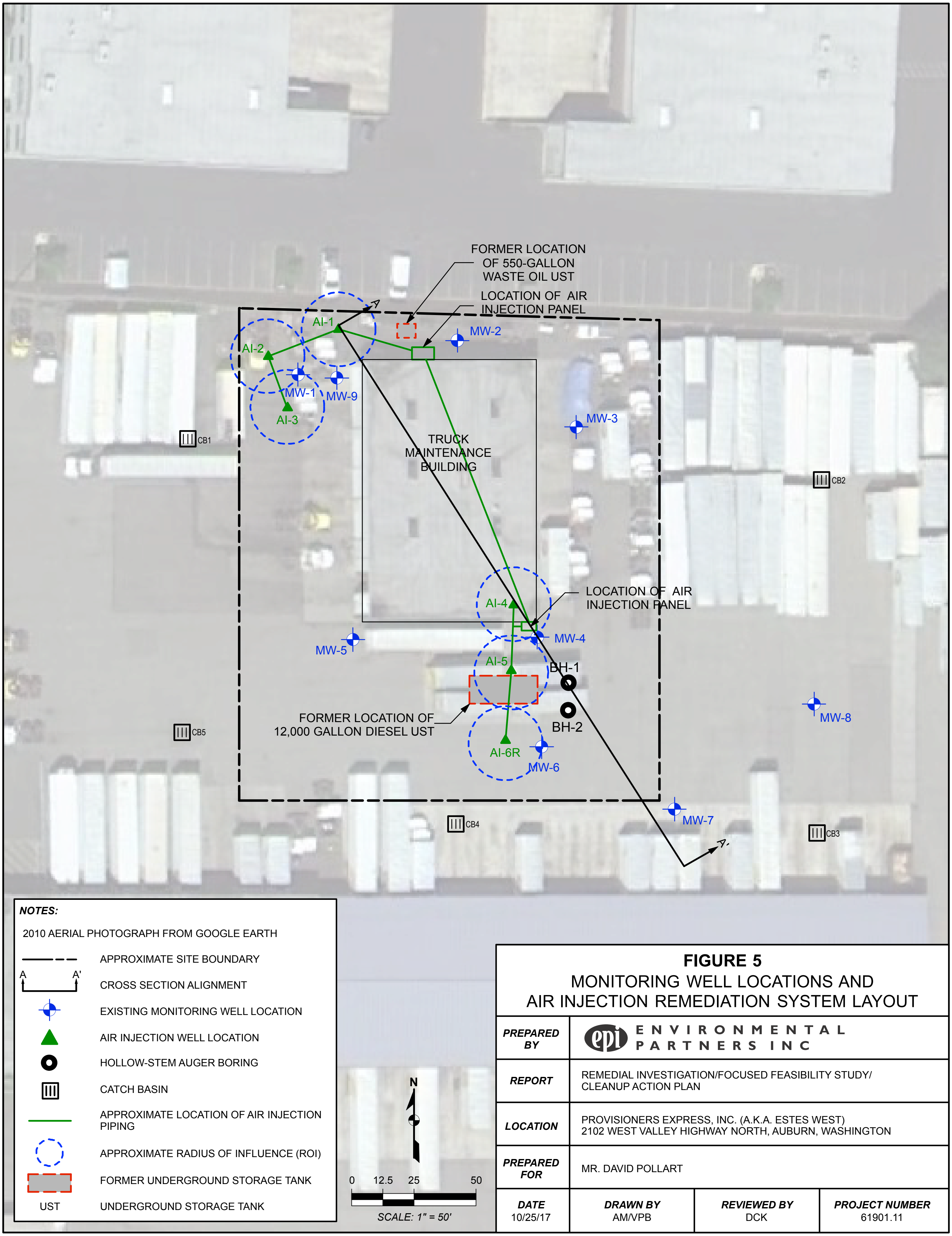
SCALE: 1" = 50'

FIGURE 4

PHASE II ESA PROBE LOCATIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN
LOCATION	PROVISIONERS EXPRESS, INC. (A.K.A. ESTES WEST) 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/25/17	AM/VPB	DCK	61901.11



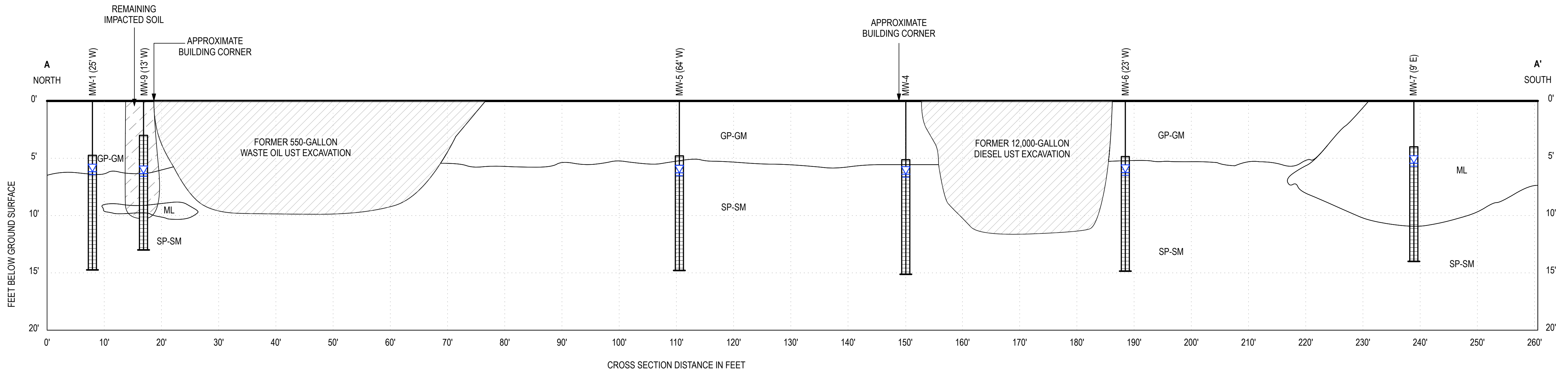
NOTES:

2010 AERIAL PHOTOGRAPH FROM GOOGLE EARTH

- APPROXIMATE SITE BOUNDARY
- A A' CROSS SECTION ALIGNMENT
- EXISTING MONITORING WELL LOCATION
- AIR INJECTION WELL LOCATION
- HOLLOW-STEM AUGER BORING
- CATCH BASIN
- APPROXIMATE LOCATION OF AIR INJECTION PIPING
- APPROXIMATE RADIUS OF INFLUENCE (ROI)
- FORMER UNDERGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK

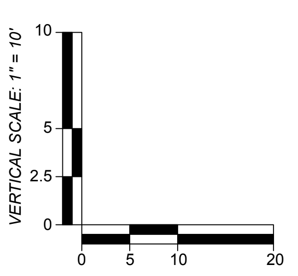
FIGURE 5
MONITORING WELL LOCATIONS AND AIR INJECTION REMEDIATION SYSTEM LAYOUT

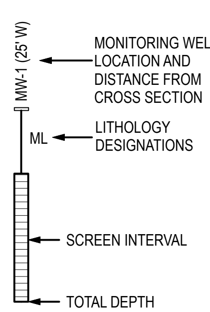
PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN		
LOCATION	PROVISIONERS EXPRESS, INC. (A.K.A. ESTES WEST) 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 10/25/17	***DRAWN BY*** AM/VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.11



NOTES:

APPROXIMATE GROUNDWATER ELEVATION AS MEASURED IN SEPTEMBER 2017 SAMPLING EVENT





	APPROXIMATE LIMITS OF FORMER REMEDIAL EXCAVATION
	REMAINING IMPACTED SOIL
UST	UNDERGROUND STORAGE UNIT
GP	POORLY-GRADED GRAVEL
ML	INORGANIC SILTS, CLAYEY SILTS OF LOW TO MEDIUM PLASTICITY
GP-GM	POORLY-GRADED GRAVEL WITH SILT AND SAND
SP-SM	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES TO SILTY SANDS, SAND-SILT MIXTURES

FIGURE 6

CROSS SECTION A-A'

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN
LOCATION	PROVISIONERS EXPRESS, INC. (A.K.A. ESTES WEST) 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/25/17	AM	JS	61901.11

Attachment A
Historical Reports
(Electronic Files Only)

Underground Storage Tank Site Assessment Report

Estes Express Facility
2102 West Valley Highway North
Auburn, Washington

Prepared For:

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

January 4, 2013

Prepared By:

Environmental Partners, Inc.
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027
(425) 395-0010

Greg McCormick, LG
Senior Geologist
WA Site Assessor No. 1052439-U7

State of Washington Licensed Geologist 674 GREGORY A. McCORMICK

Project Number: 61901.2

QR GK TR GK

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Tables

Table 1: Summary of DRO and HRO Results in Soil
Table 2: Summary of DRO and HRO Results in Ground Water

Figures

Figure 1: General Vicinity Map
Figure 2: Site Representation
Figure 3: Sample Location Map

Attachments

Attachment A: Ecology 30-Day Notice Form
Attachment B: SEPA Determination of Non-Significance
Attachment C: City of Auburn Permit
Attachment D: UST Cleaning Certification and Water Disposal Bill of Lading
Attachment E: Marine Chemist Certificate
Attachment F: Underground Storage Tank Closure and Site Assessment Notice and Site Check/Site Assessment Checklist Form
Attachment G: UST Disposal Certification
Attachment H: Analytical Report

1.0 INTRODUCTION

Environmental Partners, Inc. (EPI) is pleased to present this Underground Storage Tank (UST) Site Assessment Report for the UST that has been identified as UST No. 1 at the Estes Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (site). The general location of the site is shown on Figure 1.

The work presented herein was performed with the objective of documenting current site conditions in the vicinity of the 12,000-gallon diesel fuel UST according to the Guidance for Site Checks and Site Assessments for Underground Storage Tanks, published by the Washington Department of Ecology (Ecology) Underground Storage Tank Program in February 1991, revised April 2003. This report has been prepared in general accordance with applicable guidance provided by Ecology under the Model Toxics Control Act (MTCA) Cleanup Regulations found in Washington Administrative Code (WAC) 173-340. This UST Site Assessment report is intended to meet the reporting requirements of WAC 173-340-300.

1.1 Background

The Estes Express trucking facility (formerly Provisioners Express) is a 6-acre trucking terminal constructed in 1988. Historical research indicates the area was undeveloped prior to 1988. The facility consists of a refrigerated storage warehouse and office building, a vehicle maintenance building and paved parking and shipping and receiving docks. The 12,000-gallon diesel fuel UST, discussed in this report, was located at the exterior southeast corner of the vehicle maintenance building. There is an oil-water separator located west of the former 12,000-gallon UST.

A 550-gallon waste oil UST was removed from the northwest corner of the maintenance building in October 1998. Gasoline, diesel, and oil-range petroleum hydrocarbons were detected in samples from the soil surrounding the waste oil UST at the time of the UST removal and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed. In response to the findings of the waste oil UST removal actions, four monitoring wells (MW-1 through MW-4) were installed in the immediate vicinity of the maintenance building to assess ground water quality. The locations of the wells are shown in Figure 2.

According to available information, the 12,000-gallon UST was pumped and taken out of service in 1998 at the time of the waste oil UST removal. Data for ground water samples collected from MW-4, located within 25 feet of the location of the 12,000-gallon diesel fuel UST, have never shown concentrations of diesel-range organics (DRO) or heavy oil-range organics (HRO) at concentrations in excess of MTCA Method A Ground Water Cleanup Levels (CULs) since ground water monitoring was initiated in 1998. MW-4 has been sampled on a quarterly basis since August 2011 as part of a ground water monitoring program at the site.

1.2 Objectives

The work at UST No. 1 documented herein had the following objectives:

- Document the closure and removal of one 12,000-gallon diesel fuel UST;
- Collect representative soil samples to document the existing soil conditions beneath and from the sidewalls of the UST excavation and the stockpile material;
- Collect representative ground water samples to document the existing ground water conditions beneath the UST; and,
- Summarize analytical results for ground water, soil, and stockpile samples and compare to applicable regulatory criteria.

2.0 UST REMOVAL AND SOIL SAMPLING

2.1 UST Decommissioning

2.1.1 Site Specific Contaminants of Concern

According to the UST documents on file with the property owner and Ecology, the UST historically contained only diesel fuel. Accordingly, the analyses requested for the soil and ground water samples required by MTCA, WAC 173-340-900, Table 830-1, were:

- DRO and HRO using the Northwest Total Petroleum Hydrocarbons as Diesel-Extended (NWTPH-Dx) Method.

All soil and water samples were submitted to an Ecology-accredited analytical laboratory, Friedman & Bruya, Inc. in Seattle, Washington, for DRO and HRO analysis. Upon collection all samples were immediately placed in an iced cooler and transported to Friedman & Bruya, Inc. under standard chain-of-custody protocols.

2.1.2 Site Specific Cleanup Levels

Ecology's MTCA Method A CULs were used to assess the soil and ground water conditions in the vicinity of the UST at the time of removal. Analytical results for soil samples are summarized in Table 1 and for ground water samples are summarized in Table 2. These analytical results were compared directly to the applicable MTCA Method A CULs.

2.2 Ecology Notification and Permitting

Saybr Contractors Inc. (Saybr) completed the 30-Day Notification form to Ecology and Ecology received the form on September 11, 2012. Saybr was retained directly by the property owner to conduct the UST Decommissioning and obtain all required City of Auburn permits. A copy of the completed 30-Day Notice is included in Attachment A.

Because the facility is located within a flood plain of the Green River and adjacent to the White River Park wetland system, the City of Auburn required a State Environmental Policy Act (SEPA) checklist. The application was filed on August 29, 2012 and Mr. Kevin Snyder, Director of the City of Auburn Planning and Development Department, issued the Determination of Non-Significance on September 19, 2012. A copy of the SEPA documentation is included in Attachment B.

Saybr also obtained a grading permit through the City of Auburn and a fire permit through the Valley Regional Fire Authority. A copy of the City of Auburn grading permit is included in Attachment C.

2.2.1 UST Removal Process

UST No. 1 was overlain by an 8-inch thick concrete slab located on the south side of the Maintenance Building. The fuel dispenser island was located on the north side of the UST near a drain connected to the oil-water separator. The location and layout of the UST area relative to the Maintenance Building are depicted in Figure 3.

The concrete overlying the UST was saw cut and removed using the excavator. Approximately 3 feet of pavement sub-base and fill material were removed to expose the top of the UST and this material stockpiled beside the fuel dispenser on the north side of the UST excavation.

Prior to removal of the UST on November 28, 2012, PRS Group, Inc. (PRS) determined that the UST was empty and the interior was triple rinsed prior to removal. Approximately 300 gallons of rinsate water was removed from the UST and transported to PRS's Tacoma, Washington facility for disposal. The UST Cleaning Certificate and Bill of Lading for rinsate water disposal are included in Attachment D.

Following rinsing, the interior atmosphere of the UST was inerted using dry ice in accordance with WAC 173-360-630. Mr. George Blair, a marine chemist from Northwest Marine Chemist, Inc. tested the atmosphere inside the UST to certify the UST as inert. The Marine Chemist Certificate is included in Attachment E.

Deputy Fire Marshal, Mr. Dave Goff, with the Valley Regional Fire Authority was on-site to sign the permit and witness the removal of the UST from the ground. All work was performed with oversight from EPI's UST Assessor.

In order to facilitate removal of the UST, additional soil was removed from the sidewalls and ends of the UST and placed in the existing soil stockpile. Product lines were identified in the central part of the UST extending north to the fuel dispenser island, located approximately 10 feet from the north sidewall of the excavation. An approximately 6-foot length of the product line was removed along with the UST.

The UST was single-wall fiberglass construction and appeared to be in good condition with no visible holes or damage to the UST walls other than holes made by the excavator during removal, but after triple-rinsing and inerting. The UST measured 8-feet in diameter and approximately 36 feet in length and was calculated to have a confirmed capacity of 12,000 gallons.

Fill material surrounding the UST appeared to be in good condition with no apparent petroleum odor or discoloration. Slight petroleum odor was noted upon removal of the UST from the excavation. About 8 to 10 inches of ground water accumulated in the western half of the excavation at a depth of 10 feet below ground surface (bgs). EPI collected nine soil samples from the bottom and sidewalls of the excavation and a sample of the water at the bottom of the excavation. All samples were submitted for analysis of DRO and HRO.

EPI completed the Ecology *Underground Storage Tank Closure and Site Assessment Notice* and *Site Check/Site Assessment Checklist* forms, which are included in Attachment F.

The UST was decommissioned in a manner compliance with the requirements of WAC 173-360-385. The fiberglass UST was crushed with the excavator, placed into a 40 cubic yard Waste Management container, and transported from the site for disposal at Waste Management's Hillsborough-Tualatin Landfill in Oregon. The UST Disposal Certificate is included in Attachment G.

2.2.2 UST Excavation Soil Sampling

During excavation, Mr. Greg McCormick, L.G. of EPI (WA Site Assessor No. 1052439-U7), worked directly with Saybr to monitor soil conditions throughout the excavation process. EPI observed and documented the soil conditions using olfactory and visual indicators. Mr. McCormick used a photo-ionization detector (PID) to field screen samples of the overburden, sidewall, and excavation bottom.

Following UST removal EPI performed soil and ground water sampling to assess subsurface conditions in and around the excavation. EPI collected nine soil samples during the course of this UST assessment. The two sidewall samples (North Sidewall and South Sidewall) and two excavation end samples (East End and West End) were collected from an approximate depth of 8 feet bgs. The two bottom samples (East Bottom and West Bottom) were collected from a depth of 11 feet bgs. EPI also collected one grab sample of the ground water at the bottom of the pit as described in Section 3.0. The locations of the soil and ground water samples are depicted in Figure 3. In addition, three samples were collected from the excavated soil stockpile to determine if the material was suitable for re-use as backfill.

After collection, soil samples were immediately placed in an iced cooler and transported to Friedman & Bruya, Inc. under standard chain-of-custody protocols. Soil samples were submitted for analysis of DRO and HRO using the NWTPH-Dx Method for expedited 24-hour turn-around-time (TAT).

2.2.3 UST Excavation Soil Analytical Results

Analytical results for the soil samples are summarized in Table 1. The laboratory analytical report is presented in Attachment H.

None of the soil samples contained detectable concentrations of HRO and only one of the soil samples contained a detectable concentration of DRO. The soil sample collected from the west end of the bottom of the UST excavation (West Bottom) contained a DRO concentration of 230 milligrams/kilogram (mg/kg). This concentration is less than the MTCA Method A CUL for Unrestricted Land Uses of 2,000 mg/kg and is considered by be protective of ground water quality to a drinking water standard.

Based on these findings for soil samples from the limits of the UST removal excavation, this area complies with the requirements of the MTCA regulation and no further remediation or investigation are required.

3.0 GROUND WATER SAMPLING AND ANALYSIS

Based on the approximate 6 feet bgs static ground water level consistently observed in MW-4 (i.e., 20 feet northeast of UST No. 1. and the excavation extending to approximately 11 feet bgs, potential releases from the UST had the potential to impact shallow ground water. According to Ecology publication 90-52, Guidance for Site Checks and Site Assessments for Underground Storage Tanks, if a release has occurred within two feet of the seasonal high water table, a ground water sample must be collected. Although no confirmed release occurred, because the excavation extended to within two feet of the static ground water, EPI collected a ground water sample from beneath the UST.

3.1 Ground Water Sampling Methods

One grab sample was collected of the water at the bottom of the open UST pit using a disposal bailer. The water was transferred into the appropriate laboratory-supplied sample container and immediately labeled and placed in an iced cooler pending submittal to Friedman & Bruya, Inc. for analysis of DRO and HRO using the NWTPH-Dx Method. The ground water sample was transported under standard chain-of-custody protocols and submitted for expedited 24-hour turn around time. Final laboratory analytical results are presented in Attachment H.

3.2 Ground Water Sampling Results

A summary of DRO and HRO sampling results for the single ground water sample is presented in Table 2. The laboratory analytical report is included as Attachment H.

DRO was detected at a concentration of 55,000 micrograms/Liter (µg/L), which is greater than the MTCA Method A CUL for DRO in ground water of 500 µg/L. HRO was detected at a concentration of 790 µg/L, which is greater than the MTCA Method A CUL for HRO in ground water of 500 µg/L.

PRS was retained to remove recoverable ground water from the open excavation. On November 29, 2012, PRS pumped approximately 1,500 gallons of water from the bottom of the UST excavation. A copy of the Bill of Lading from the water disposal is included in Attachment D.

Due to site constraints and the location of the open excavation it was necessary to backfill the excavation prior to additional ground water grab sampling. The location of existing well MW-4 is sufficiently close to the UST removal excavation that analytical results for that well are indicative of local ground water quality.

4.0 STOCKPILE SAMPLING AND SITE RESTORATION

The following sections describe the stockpile sampling and site restoration activities following removal of UST No. 1.

4.1 Soil Stockpile Sampling and Results

Three soil samples were collected from the stockpile of fill material removed from the excavation. Based on Ecology publication 90-52, *Guidance for Site Checks and Assessments for Underground Storage Tanks*, three stockpile samples are required for up to 100 cubic yards of excavated stockpile soil and the volume of soil excavated was less than 100 cubic yards.

EPI collected representative grab samples directly from the stockpile. Stockpile samples were placed into new, laboratory-supplied, pre-labeled sample containers and were submitted to Friedman & Bruya, Inc. for analysis of DRO and HRO using the NWTPH-Dx Method. None of the samples of the excavated and stockpiled soils contained detectable concentrations of DRO or HRO. Summaries of the stockpile sample analytical results are included in Table 1. The laboratory analytical report is presented in Attachment H.

4.2 Site Restoration

Since none of the stockpile samples contained detectable concentrations of DRO or HRO, the stockpiled soil was deemed compliant with MTCA Method A Soil CULs and therefore acceptable for use as backfill material for the UST excavation. Clean Type 17 fill was imported to make up the balance of the backfill material attributable to the volume of the removed UST. During backfilling, the fill material was compacted to within 5 inches of surface grade and re-surfaced with concrete according to client specifications.

5.0 CONCLUSIONS

The following conclusions are supported by the above site assessment activities at the Estes facility:

- One 12,000-gallon UST formerly containing diesel fuel was decommissioned and removed in a manner fully consistent with the requirements of the MTCA regulation and applicable Ecology guidance.

- Six soil samples were collected from the sidewalls, ends, and bottom of the UST excavation. None of the soil samples contained DRO or HRO at concentrations exceeding their respective MTCA Method A Cleanup Levels for Unrestricted Land Uses.

- Ground water was encountered at approximately 10 feet bgs, which was approximately 1 foot above the bottom of the UST excavation.

- A grab sample of water from the bottom of the removal excavation contained DRO and HRO at concentrations exceeding the MTCA Method A Cleanup Level for Ground Water. This finding is not consistent with other observations at the Site. No soil samples were found to contain DRO or HRO at concentrations above a MTCA Method A Soil CUL, including those from the base of the excavation and the UST and piping were found to be in good condition with no apparent signs of leakage. Moreover, the immediately adjacent monitoring well, MW-4, has not contained DRO or HRO at concentrations exceeding a MTCA Method A CUL since its installation in 1999. The 12,000-gallon UST was initially taken out of service and emptied in 1998.

- It is believed that the observed impacts to water in the open excavation are anomalous and are not indicative of actual Site conditions. The likely source of those impacts is a small amount of impacted soil material coming into contact with the limited amount of ground water. In response to this finding, approximately 1,500 gallons of water were removed from the bottom of the UST excavation to remove the small volume of impacted. Future monitoring of well MW-4, immediately adjacent to the former UST, will be used to assess local ground water quality and evaluate the existence of actual impacts to ground water.

6.0 LIMITATIONS

To the extent that preparation of this report has required the application of best professional judgment and the employment of scientific principles, certain results of this work have been based on subjective interpretation. We make no warranties, express or implied including and without limitation warranties as to merchantability or fitness for a particular purpose. The information provided in this report is not to be construed as legal advice.

This report was prepared solely for Mr. David Pollart and his affiliates, and the contents herein may not be used or relied upon by any other person without the express written consent and authorization of Environmental Partners, Inc.

Tables

Table 1

Summary of DRO and HRO Results in Soil

12,000-gallon UST Site Assessment

Estes Express Facility

2102 West Valley Highway North - Auburn, Washington

Sample Identification	Collection Date	Depth (Feet)	Petroleum Hydrocarbons	
			Diesel-Range Petroleum Hydrocarbons (DRO)[a]	Higher-Range Petroleum Hydrocarbons (HRO)[a]
Stockpile 1	11/28/12	NA	<50	<250
Stockpile 2	11/28/12	NA	<50	<250
Stockpile 3	11/28/12	NA	<50	<250
West End	11/28/12	8	<50	<250
West Bottom	11/28/12	11	**230**	<250
North Sidewall	11/28/12	8	<50	<250
South Sidewall	11/28/12	8	<50	<250
East Bottom	11/28/12	11	<50	<250
East End	11/28/12	8	<50	<250
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses (in mg/kg)			**2,000**	**2,000**

NOTES:

a	Using NWTPH-Dx Methods
Bolded	Indicates a detection above the Method Detection Limit
Bolded & Shaded	Exceeds applicable cleanup level
X	Indicates sample collected from the terminal limits of the remedial excavation
--	Indicates sample was not analyzed for this analyte
	All concentrations in milligrams per kilogram (mg/kg)

Table 2

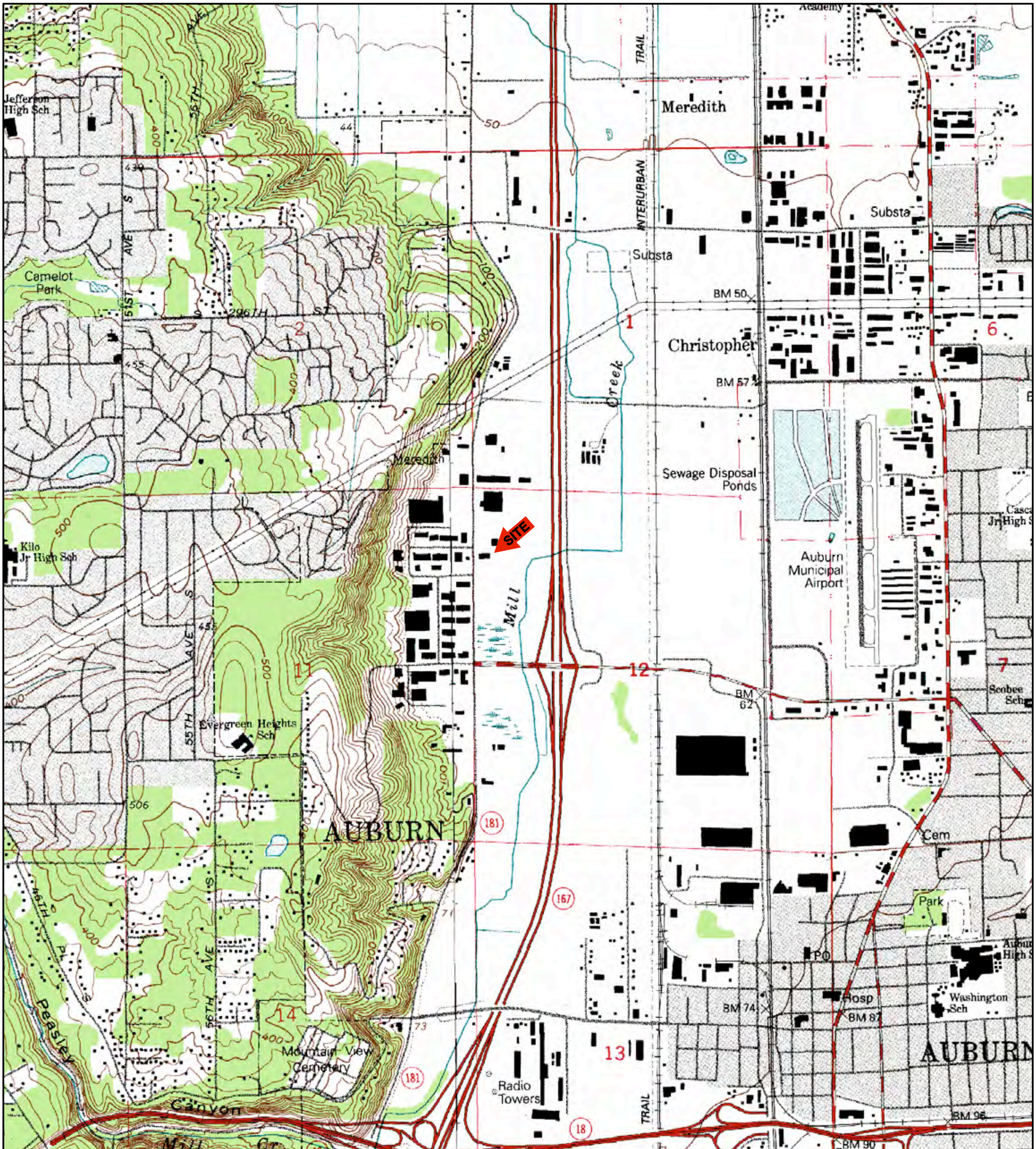
Summary of DRO and HRO Results in Ground Water
12,000-gallon UST Site Assessment
Estes Express Facility
2102 West Valley Highway North - Auburn, Washington

Sample Identification	Collection Date	Petroleum Hydrocarbons	
		Diesel-Range Petroleum Hydrocarbons (DRO)[a]	Higher-Range Petroleum Hydrocarbons (HRO)[a]
UST 1 Water	11/28/12	**55,000**	**790**
MTCA Method A Soil Cleanup Levels for Ground Water (in µg/L)		**500**	**500**

NOTES:

a	Using NWTPH-Dx Methods
Bolded	Indicates a detection above the Method Detection Limit
Bolded & Shaded	Exceeds applicable cleanup level
--	Indicates sample was not analyzed for this analyte
	All concentration in micrograms per liter (µg/L)

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

EPI ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

n

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

UNDERGROUND STORAGE TANK

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

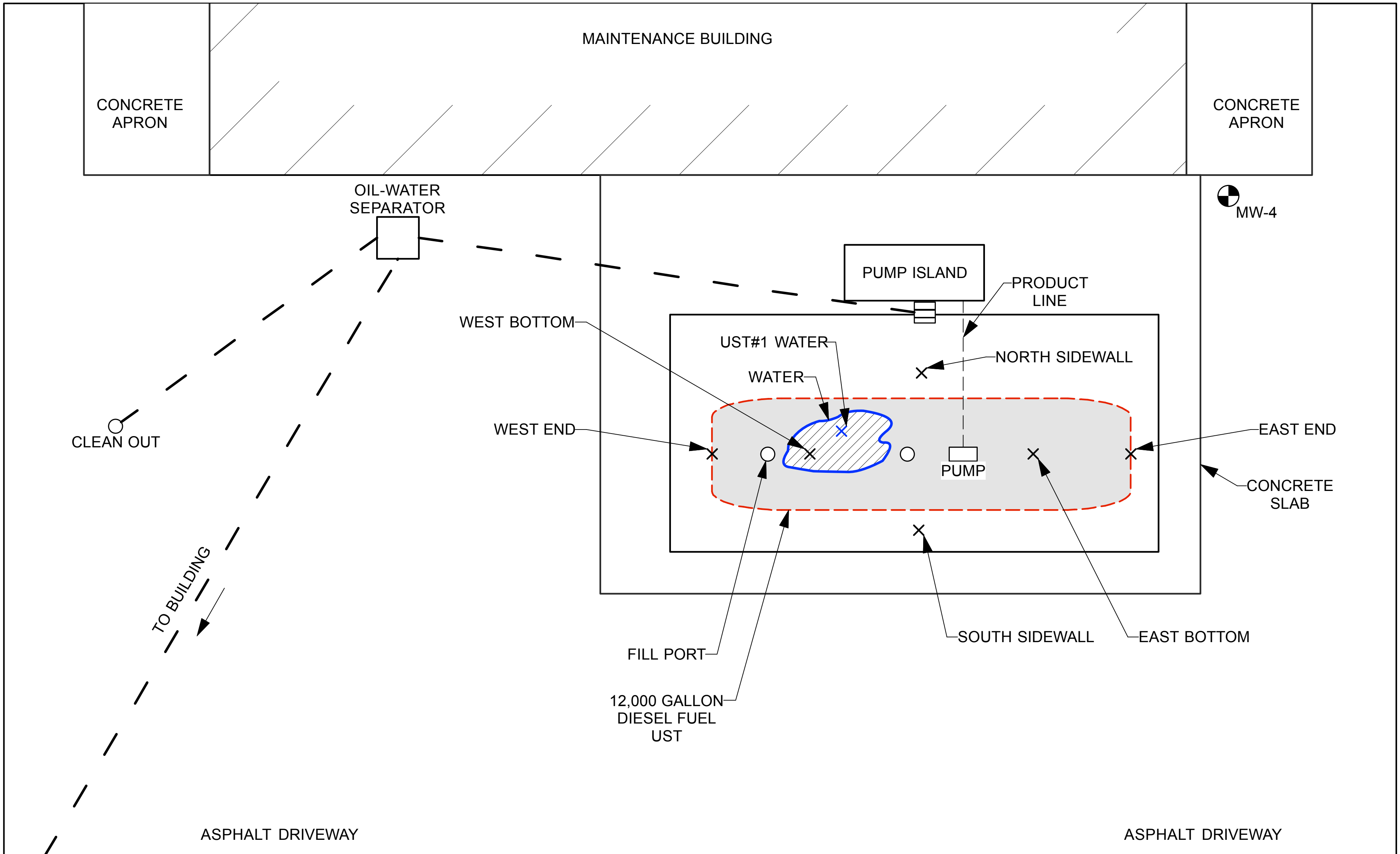
epi ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ALW	GAM	12/27/12



KEY:

UST LOCATION
SOIL SAMPLE LOCATION
WATER SAMPLE LOCATION
MONITORING WELL

0 2.5 5 10
APPROXIMATE SCALE: 1" = 10'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 3

SAMPLE LOCATION MAP

PROJECT	61901.2
PREPARED FOR	ESTES EXPRESS FACILITY
LOCATION	2102 W VALLEY HWY N AUBURN, WASHINGTON

SHEET	***DRAWN BY***	***REVIEWED BY***	***DATE***
1 of 1	*ALW*	*GAM*	*12/14/12*

Attachments

Attachment A
Ecology 30-Day Notice Form

MMRO
Kinzy

UNDERGROUND STORAGE TANK (UST)
30-DAY NOTICE

(See back of form for instructions)

DEPARTMENT OF ECOLOGY State of Washington

FOR OFFICE USE ONLY	
Site ID #	101210
FS ID #	91612121

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300

SITE INFORMATION

600-050-779 001 0002
Tag or UBI number

Provisioners Express (Site ID No. 101210)
Site Name

2102 W Valley Highway N
Site Physical Address

Auburn, WA — 98001
City — Zip Code

253.796.3900
Site Phone Number

OWNER INFORMATION
(this form will be returned to this address)

David Pollart
UST Owner/Operator

2102 W Valley Highway N
Mailing Address/PO Box

Auburn, WA — 98001
City — Zip Code

253.796.3000
Owner/Operator Phone Number

dapol13@gmail.com
Owner/Operator Email Address

TANK INFORMATION

Tank ID	Substance Stored	Capacity	Date Project is Expected to Begin	Comments:
1	Diesel	12,000-gal	10/22/2012	The City of Auburn is requiring that this project undergo SEPA review. The project will begin once a SEPA determination has been issued, which we expect to happen on or before 10/22/2012.

1) SERVICE PROVIDER INFORMATION - check the appropriate boxes

PLEASE NOTE: INDIVIDUALS PERFORMING UST SERVICES MUST BE ICC CERTIFIED OR HAVE PASSED ANOTHER QUALIFYING EXAM APPROVED BY THE DEPARTMENT OF ECOLOGY.

☐ Installer ☒ Decommissioner ☐ Site Assessor

Saybr Contractors, Inc.
Service Provider Company Name

Adam Inman
Certified Service Provider Name

5044195
ICC Certification #

Mike Muller, Project Manager
Contact Person

253.531.2144
Contact Phone Number

mmuller@saybr.com
Contact Email Address

2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MORE THAN ONE PROVIDER) - check the appropriate boxes

☐ Installer ☐ Decommissioner ☐ Site Assessor

Service Provider Company Name

Certified Service Provider Name

ICC Certification #

Contact Person

Contact Phone Number

Contact Email Address

NWRO
King

DEPARTMENT OF
ECOLOGY
State of Washington

UNDERGROUND STORAGE TANK (UST)
30-DAY NOTICE

(See back of form for instructions)

FOR OFFICE USE ONLY
Site ID # 101210
FS ID # 91161212
RECEIVED
SEP 10 2012
DEPT OF ECOLOGY
TCP - NWRO

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300

SITE INFORMATION

101210
Tag or UBI number

Provisioners Express, Inc.
Site Name

2102 West Valley Hwy N.
Site Physical Address

Auburn 98098
City Zip Code

206 948 1330
Site Phone Number

OWNER INFORMATION
(this form will be returned to this address)

david pollart
UST Owner/Operator

P.O. Box 1096
Mailing Address/PO Box

Mercer Island WA 98040
City Zip Code

206 948 1330
Owner/Operator Phone Number

darol13@gmail.com
Owner/Operator Email Address

TANK INFORMATION

Tank ID	Substance Stored	Capacity	Date Project is Expected to Begin
TANK 1	diesel	12000	10/1/12

Comments:

1) SERVICE PROVIDER INFORMATION - check the appropriate boxes

PLEASE NOTE: INDIVIDUALS PERFORMING UST SERVICES MUST BE ICC CERTIFIED OR HAVE PASSED ANOTHER QUALIFYING EXAM APPROVED BY THE DEPARTMENT OF ECOLOGY.

☐ Installer ☒ Decommissioner ☐ Site Assessor

Saybr Construction, Inc.
Service Provider Company Name

Adam Inman
Certified Service Provider Name

5044195
ICC Certification #

Mike Muller
Contact Person

206·730·6235
Contact Phone Number

mmuller@saybr.com
Contact Email Address

2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MORE THAN ONE PROVIDER) - check the appropriate boxes

☐ Installer ☐ Decommissioner ☒ Site Assessor

Environmental Partners, Inc.
Service Provider Company Name

Greg McCormick
Certified Service Provider Name

1052439-U7
ICC Certification #

Greg McCormick
Contact Person

425 395 0010
Contact Phone Number

gregm@EPI-WA.com
Contact Email Address

Attachment B

SEPA Determination of Non-Significance

CITY OF AUBURN WASHINGTON

Peter B. Lewis, Mayor

25 West Main Street * Auburn WA 98001-4998 * www.auburnwa.gov * 253-931-3000

NOTICE OF APPLICATION AND DETERMINATION OF NON-SIGNIFICANCE
Provisioners Express Removal of 12,000 gallon tank
SEP12-0026

The City of Auburn is issuing a Notice of Application and a Determination of Non-Significance. Following is a description of the application and the process for review. The permit application may be reviewed at the offices of the Auburn Planning and Development Department at One East Main Street, 2nd Floor, Auburn, WA 98001, between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday, excluding holidays.

Application filed: August 29, 2012
Complete application: September 19, 2012
Notice of application: September 19, 2012

Project Permit Application: SEP12-0026

Description of Proposal: The applicant proposes to remove an existing 12,000 gallon underground storage tank. This proposed work will require the excavation and backfill of approximately 450 cubic yards of material, and the addition of approximately 50 cubic yards of imported fill. The site is developed with two buildings, an approximately 28,085 square foot building is used as a transit warehouse and office, and a 7,280 square foot building is used as a transit maintenance building. This site is currently paved. The applicant proposes to backfill the excavated area and repave the area after the tank is removed.

Project Proponent: Saybr Contractors, Inc.
Attn: Mike Muller
3852 S. 66th Street
Tacoma, WA 98409
253-531-2144

Property Owner: Provisioners Express, Inc.
Attn: David Pollart
2102 W Valley Highway N
Auburn, WA 98101
253-796-3900

Project Location: 2102 West Valley Highway North (PID: 1221049034)

Studies/Plans Submitted with Application: None

STATEMENT OF CONSISTENCY AND LIST OF APPLICABLE DEVELOPMENT REGULATIONS: This project is subject to and shall be consistent with the City of Auburn Zoning Code and Design Standards. May need to expand if other codes are applicable.

Other Permits, Plans, and Approvals which May be Required: A City of Auburn grading permit, a storm permit and a "tank removal permit" from the Valley Regional Fire Authority are required; the applicant has applied to the Washington State Department of Ecology for a 30 day notice of an underground storage tank decommissioning; additional permits from King County Public Health may also be necessary.

Lead Agency: City of Auburn

The lead agency for this proposal has determined that it does not have 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.

All persons may comment on this application. This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date issued below. Comments must be in writing and submitted by 5:00 p.m. on **October 4, 2012.**

Any person aggrieved of the City's determination may file an appeal with the Auburn City Clerk within 14 days of the close of the comment period, or by 5:00 p.m. on **October 18, 2012.**

For questions regarding this SEPA determination, please contact Hillary Taylor, Senior Planner, at (253) 288-7412, htaylor@auburnwa.gov. Any person wishing to become a party of record regarding the SEPA determination shall include in their comments that they wish to receive notice of and participate in any hearings, if relevant, and request a copy of decisions once made. A party of record may appeal the decision on this application by filing a complete appeal application within 14 calendar days of the date of decision.

Tentative Hearing: A public hearing is not required for this proposal.

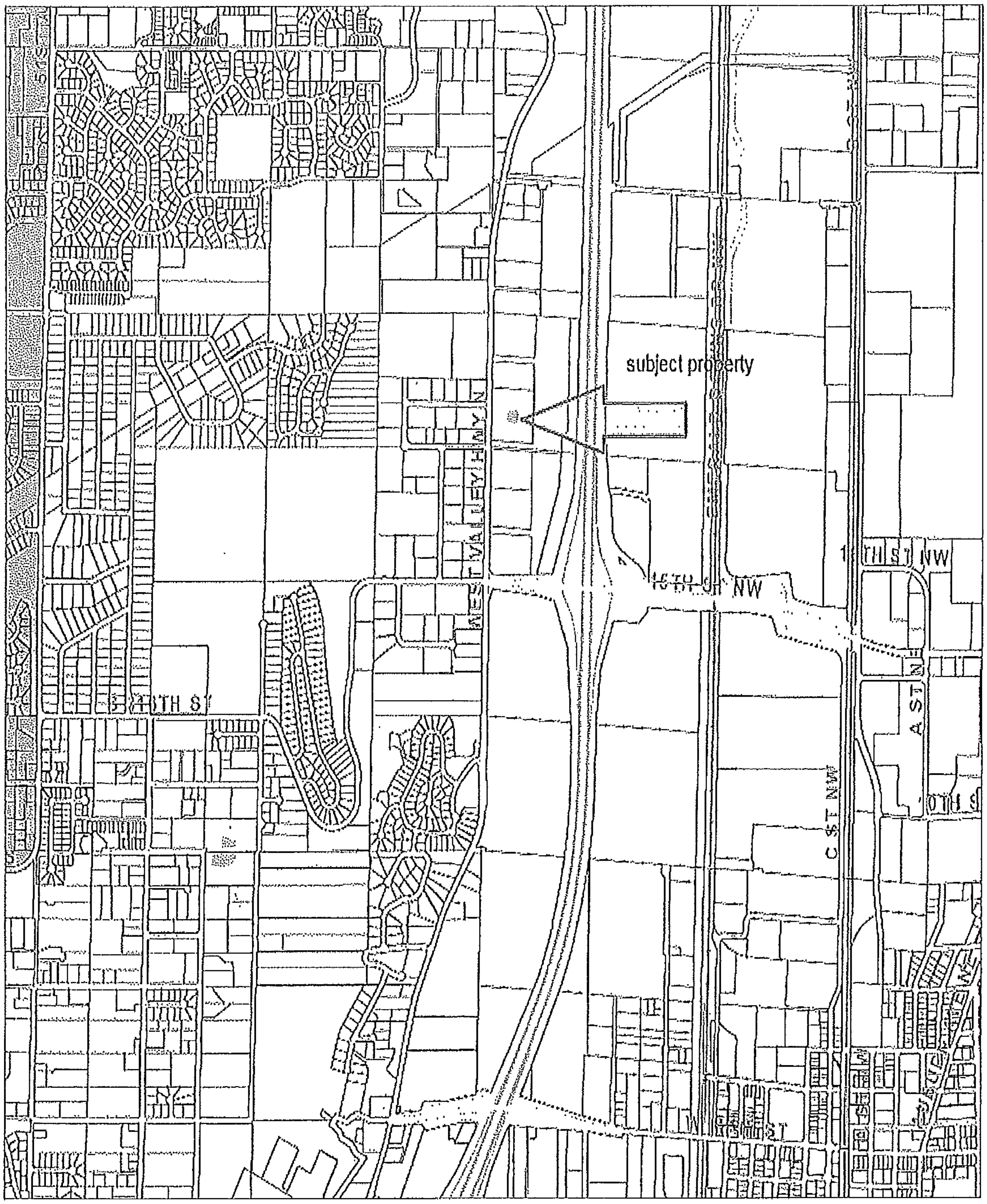
Responsible Official:	Kevin H. Snyder, AICP
Position/Title:	Director, Planning and Development Department
Address:	25 West Main Street Auburn, Washington 98001 (253) 931-3090

Date Issued: **<u>September 19, 2012</u>** **Signature:** ______________________

Kevin H. Snyder, AICP
Director, Planning and Development Department

Note: This determination does not constitute approval of the proposal. Approval of the proposal can only be made by the legislative or administrative body vested with that authority. The proposal is required to meet all applicable regulations.

SEP12-0026 for 2102 West Valley Highway North



Printed Date:9/13/2012
Map Created by City of Auburn eGIS

Information shown is for general reference purposes only and does not necessarily represent exact geographic or cartographic data as mapped. The City of Auburn makes no warranty as to its accuracy.

FINAL STAFF EVALUATION FOR ENVIRONMENTAL CHECKLIST SEP12-0026

Date:	September 19, 2012
Project Name:	Provisioners Express Underground Storage Tank Removal
Project Proponent:	Saybr Contractors, Inc. Mike Muller 3852 S. 66th Street Tacoma, Wa 98409 253-531-2144
Contact:	Amanda Grindle, Permit Coordinator for Saybr Contractors Muir Contracting, Inc. 1423 E. 29th Street, Suite 311 Tacoma, WA 98409 253-882-4546
Location:	2102 West Valley Highway North
Property Owner:	David Pollart, Provisioners Express, Inc. 2102 West Valley Highway North Auburn, WA 98101 253-796-3900
Parcel Number(s):	1221049034
Proposal:	The applicant proposes to remove an existing underground 12,000 gallon underground storage tank. The applicant proposes to remove the concrete slab in order to remove the underground storage tank. This proposed work will require the excavation of 450 cubic yards of material. Once the removal of the underground storage tank is complete, the project work proposes to backfill the area with the excavated material, and an additional 50 cubic yards of fill to grade the area to match the surrounding finished grade. The area will then be repaved.

BACKGROUND

The applicant proposes to remove an existing underground storage tank. The tank stores diesel fuel. This fuel will be emptied from the tank before the tank is removed. The tank will be certified as inert by a Marine Chemist prior to the removal of the tank. All tank removal activities will be supervised by an ICC (International Code Council) certified UST (Underground Storage Tank) Decommissioning Supervisor. No signage, landscaping, or buildings will be impacted by the proposed project.

For questions 1. through 6. please see the checklist received August 29, 2012

7. Future additions, or expansions: None known at this time.

8. Other Environmental Information: None provided.

9. Pending Applications: The applicant has submitted for a fire permit from the Valley Regional Fire Authority (FIR12-0105). A City of Auburn grading permit is required, and a storm permit is also necessary; and the applicant has submitted to the Washington State Department of Ecology for a 30 day notice of intent to decommission an underground storage tank; additional permits from the Puget Sound Clean Air Agency and King County Public Health may also be necessary.

10. Complete Description of proposal:
The applicant proposes to remove the existing slab concrete in order to remove the existing underground storage tank. This proposed work will require the excavation of 450 cubic yards of material. Once the removal of the existing surrounding soil material is removed it will be stockpiled and stored on site on Visqueen and covered with Visqueen. This soil will be samples and tested for contaminants. In a follow up email the applicant stated that "if soil is found to be contaminated, the excavation would be secured and the project would be put on hold until we notified the Department of Ecology and developed a clean-up action. Once the site received a No Further Action designation from DOE, then we would backfill the excavation - most likely with additional Type 17. The amount would depend on how much contaminated soil we removed." If no contaminates are found the applicant shall proceed with the removal of the tank, the backfill of the area with the stockpiled soil, plus an additional 50 cubic yards of imported fill to grade the area to match finished grade. The area will then be repaved to match the surrounding pavement. The applicant proposes to comply with all applicable sections of building code, electrical code, fire code and codes related to the proper handling of flammable and combustible liquids.

Mitigation measures proposed:
This proposed project will result in the excavation of an underground storage tank, the proposed project is not expected to create any lasting negative impacts. The applicant shall comply with all applicable sections of local, State and Federal law regarding the safe handling of flammable and combustible liquids. The applicant is also responsible for the surface water runoff from the property. This is an existing development with a previously approved storm water management system. Pursuant to the Auburn City Code, ACC 13.48.21. The applicant shall be required to submit a grading plan in association with this development, civil site design plans addressing this requirement shall be approved by the City.

ENVIRONMENTAL ELEMENTS

1. Earth

A. General description of the site:

x Flat
____ rolling
____ hilly
____ steep slopes
____ mountainous
____ Other

B. **What is the steepest slope on the site (approximate percent slope)?**
Concur with the checklist. The slope is generally less than 1%.

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.**
Disagree with the checklist. The Mullineaux, D.R., 1965, Geologic map of the Auburn quadrangle, King and Pierce Counties, Washington: U.S. Geological Survey, Geologic Quadrangle Map GQ-406, scale 1:24000, identifies this area as: Alluvial Soils Qaw, mostly gravel and sand deposited by White River. Bouldery cobble and pebble-cobble gravel and sand in White River valley. Pebble-cobble gravel overlain by thin sand in Duwamish Valley at mouth of White River valley, grades outward to thick coarse and medium sand overlain by thin silt, clay and peat. Forms distinct fan in Duwamish Valley at mouth of White River valley. Pattern indicates recent, unmodified channel deposits at surface. Maximum thickness in Duwamish Valley more than 100 feet. Contains glassy volcanic material possibly reactive in some concrete.

D. **Are there surface indications or history of unstable soils in the immediate vicinity? If yes, describe below.**
Concur with the checklist.

E. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**
Concur with the checklist, and with additional information submitted by the applicant. For the removal of the existing tank approximately 450 cubic feet of soil will be removed, stockpiled on site and backfilled after the underground storage tank is removed. Approximately 50 additional cubic feet of imported soil will be added to the excavation site to fill the volume currently displaced by the underground storage tank. The imported fill is proposed to be Type 17 pit-run and 4" of crushed rock proposed to be placed to surgrade.

F. **Could erosion occur as a result of clearing, construction, or use? If yes, generally describe below.**
Concur with the checklist.

G. **About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**
Concur with the checklist. 100% of the subject areas is covered with impervious surfaces. The underground storage tank is currently covered by concrete, after the tank is removed and the area is backfilled new concrete will be poured on the subject area.

H. **Proposed measures to reduce or control erosion, or other impacts to the earth.**
Concur with the checklist. Catch basin protection equipment and silt fence will be installed as necessary prior to excavation activities. Stockpiled excavated soil will be placed on Visqueen and covered with Visqueen while waiting for soil sample results. The applicant is required to sample the soil for contaminants prior to completing the removal of the tank and backfilling the area with the excavated soil. In a follow up email the applicant stated that "if soil is found to be contaminated, the excavation would be secured and the project would be put on hold until we notified the Department of Ecology and developed a clean-up action. Once the site received a No Further Action designation from DOE, then we would backfill the excavation - most likely with additional Type 17. The amount would

depend on how much contaminated soil we removed." If no contaminates are found the applicant shall proceed with the removal of the tank, the backfill of the area with the stockpiled soil, plus an additional 50 cubic yards of imported fill to grade the area to match finished grade. The applicant shall be required to submit a grading plan to the City of Auburn. The grading plan shall comply with the City Design Standards and shall provide for best management practices during construction.

2. 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.**
Concur with the checklist.

B. **Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.**
Concur with the checklist. During tank removal, minimal dust and emissions from equipment will likely occur. No emissions will be generated by the finished project.

C. **Proposed measures to reduce or control emissions or other impacts to air, if any:**
Concur with the checklist. Appropriate dust control measures will be used during excavation activities, including watering areas. Vehicles and machinery will be equipped with appropriate emission controlling equipment.

3. Water

A. Surface Water

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.**
Disagree with the checklist. Mill Creek is located to the east of the subject property and is approximately 515 feet from the proposed underground storage tank. Mill Creek is classified by the Auburn City Code as a Type II perennial, salmon bearing stream with a required 75' buffer. The proposed project is not located within the required buffer area.

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.**
Concur with the checklist. The proposed project will not require work within the vicinity of any body of water. The proposed project is over 515 feet from Mill Creek and is over 325 feet from known mapped wetlands.

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.**
Not applicable. The project will not dredge material from surface water or wetlands and no fill in critical areas is proposed.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**
Concur with the checklist. Not applicable.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site**

plan.
Concur with the checklist. The proposal does not lie within the mapped 100-year flood plain.

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.**
Concur with the checklist. This proposal will not result in any additional discharges of waste materials to surface waters.

B. Ground Water

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**
Concur with the checklist. No ground water will be withdrawn. The applicant has submitted a storm water plan and will be required to submit a grading plan.

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 any toxic 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) is (are) expected to serve.**
Concur with the checklist. Not applicable.

C. Water Runoff (including storm water)

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.**
Concur with the checklist. The project site currently generates some surface run off from existing paved surfaces which are proposed to be removed and replaced. The completed proposed project will result in the same amount of runoff from the replacement concrete pavement surfaces.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**
Concur with the checklist. Best management practices will be implemented to reduce or avoid potential discharges.

3) **Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:**
Concur with the checklist. Best management practices will be required during construction to control storm water runoff.

4. Plants

A. **Indicate types of vegetation found on the site:**

X Deciduous Tree:
___ Evergreen Tree:
x Shrubs:
___ Grass
___ Pasture
___ Crop or Grain
___ Wet Soil Plants:
___ Water Plants:

____ Other Types of
____ Vegetation:

B. **What kind and amount of vegetation will be removed or altered?**
Concur with the checklist.

C. **List threatened or endangered species known to be on or near the site:**
Concur with the checklist. Not applicable

D. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**
Concur with the checklist. No new landscaping is proposed at this time, the site has existing landscaping.

5. Animals

A. **Indicate any birds and animals which have been observed on or near the site or are known to be on or near the site:**

x Birds: songbirds, other
x Mammals: Small rodents, other
____ Fish:

B. **List any threatened or endangered species known to be on or near the site.**
Concur with the checklist. Not applicable.

C. **Is the site part of a migration route? If so, explain.**
The Green River Valley is part of the Pacific Flyway for migratory birds.

D. **Proposed measures to preserve or enhance wildlife, if any:**
Concur with the checklist.

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.**
Concur with the checklist. Not applicable.

B. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**
Concur with the checklist. Not applicable.

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:**
Concur with the checklist. Not applicable.

7. Environmental Health

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.

A. **Describe special emergency services that might be required:**
Concur with the checklist. This proposal will involve the removal of an underground

storage tank used for the dispensing of diesel fuels. The applicant has submitted for a fire permit (FIR12-0105) and is required to comply with all applicable State and Federal laws.

B. **Proposed measures to reduce or control environmental health hazards, if any:**
Concur with the checklist. The checklist asserts that the "tank will be inerted prior to removal by a certified Marine Chemist. All tank removal activities will be supervised by an ICC certified UST Decommissioning Supervisor." Here, ICC stands for "International Code Council", and UST is an acronym for "underground storage tank".

8. Noise

A. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**
Concur with the checklist.

B. **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.**
Concur with the checklist.

C. **Proposed measures to reduce or control noise impact, if any:**
Concur with the checklist. Construction activities related to the project will be in accordance with the City noise standards (Section 8.28) and ordinances. The applicant states in the checklist that "noise-reducing mufflers will be in place on all equipment and vehicles."

9. Land and Shoreline Use

A. **What is the current use of the site and adjacent properties?**
Concur with the checklist. The property is currently used as a transit warehouse and office.

B. **Has the site been used for agriculture? If so, describe:**
Concur with the checklist. It is not known if the site has been used for agricultural purposes in the past.

C. **Describe any structures on the site:**
Concur with the checklist. The site is developed with two buildings, an approximately 28,085 square foot building is used as a transit warehouse and office, and a 7,280 square foot building is used as a transit maintenance building.

D. **Will any structures be demolished? If so, what?**
Not applicable. No structures are proposed to be demolished, however existing concrete will be demolished and replaced as part of the proposed project.

E. **What is the current zoning classification of the site?**
The project will occur within the M1, Light Industrial District.

F. **What is the current comprehensive plan designation of the site?**
The project will occur within an area designated for Light Industrial.

G. **If applicable, what is the current shoreline master program designation of the site?**
Concur with the checklist. Not applicable.

H. **Has any part of the site been classified as an "environmentally sensitive" area? If**

so, specify:
Disagree with the checklist. The Applicant's project is located within the critical area known as Ground Water Protection Zone 4. The Applicant shall implement best management practices for water resource protection per ACC 16.10.120(E)2. This project is also located within a critical area known as a Seismic Hazard Area.

I. **Approximately how many people would reside or work in the completed project?**
Concur with the checklist.

J. **Approximately how many people would the completed project displace?**
Concur with the checklist. Not applicable.

K. **Proposed measures to avoid or reduce displacement impacts, if any:**
Concur with the checklist. Not applicable.

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

10. Housing

A. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**
Concur with the checklist. Not applicable.

B. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**
Concur with the checklist. Not applicable.

C. **Proposed measures to reduce or control housing impacts, if any:**
Concur with the checklist. Not applicable.

11. Aesthetics

A. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**
Concur with the checklist. The proposed project will not alter any of the existing structures on site.

B. **What views in the immediate vicinity would be altered or obstructed?**
Concur with the checklist. No views in the immediate vicinity would be significantly altered or obstructed.

C. **Proposed measures to reduce or control aesthetic impacts, if any:**
Concur with the checklist. Not applicable.

12. Light and Glare

A. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**
Concur with the checklist. Not applicable.

B. **Could light or glare from the finished project be a safety hazard or interfere with views?**
Concur with the checklist. No new light or glare will be created by the completed project.

C. **What existing off-site sources of light or glare may affect your proposal?**
Concur with the checklist. Not applicable.

D. **Proposed measures to reduce or control light and glare impacts, if any:**
Concur with the checklist. Not applicable.

13. Recreation

A. **What designated and informal recreational opportunities are in the immediate vicinity?**
Agree with the checklist. The subject property is not located near any designated or informal recreational opportunities.

Would the proposed project displace any existing recreational uses? If so, describe.
Concur with the checklist. Not applicable.

B. **Proposed measures to reduce or control impacts on recreation including recreation opportunities to be provided by the project or applicant, if any:**
Concur with the checklist. Not applicable.

14. 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:**
Concur with the checklist. There are no known places or objects listed on, or proposed for, national, state, or local preservation registers. In the event that archaeological or historic materials are discovered during the project activities, work in immediate vicinity will stop, the area will be secured, and the Department of Archaeology and Historic Preservation and the concerned tribes will be notified.

B. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**
Concur with the checklist. Not applicable.

C. **Proposed measures to reduce or control impacts, if any:**
Concur with the checklist. Not applicable.

15. 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.**
Concur with the checklist. The site is served by West Valley Highway North and takes access to this road on the western side of the property. Highway 167 is located to the east of the site, and can be accessed by vehicles driving south on West Valley Highway North to turn east on 15^{th} ST NW.

B. **Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**
Agree with the checklist. King County Metro (Route 152) currently serves the site from downtown Seattle.

C. **How many parking spaces would the completed project have? How many would the**

project eliminate?
Concur with the checklist. This project will not alter any on-street parking that currently exists within this project area. No parking spaces will be created or eliminated by this project.

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):**
Not applicable.

E. **Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe:**
Concur with the checklist. Not applicable.

F. **How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**
Concur with the checklist. Not applicable.

G. **Proposed measures to reduce or control transportation impacts, if any:**
Concur with the checklist. Not applicable.

16. 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:**
Concur with the checklist. During the decommissioning process the project may result in an increased need for fire protection; however, the decommissioning and removal of the tank is proposed to be completed in one day. The entire project is proposed to be completed in one week. Once the project is complete no additional protection services will be required.

B. **Proposed measures to reduce or control direct impact on public services, if any:**
Concur with the checklist.

17. Utilities

A. **Please indicate below what utilities are currently available at the site:**

x	Electricity	x	sanitary sewer
	natural gas,		septic system
x	water	x	other – storm drainage
x	refuse service,	x	telephone

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:**
Concur with the checklist.

CONCLUSION

DETERMINATION OF NON-SIGNIFICANCE
Based on this analysis, staff finds that the proposal does not need to be mitigated under the

powers of the State Environmental Policy Act (SEPA). Any probable significant adverse impacts on the environment associated with the proposal are addressed by the Auburn City Code and will be mitigated by the Auburn City Code, or by Federal regulations. The City reserves the right to review any future revisions or alterations to the site or to the proposal in order to determine the environmental significance or non-significance of the project at that point in time.

Prepared By: Hillary Taylor, Senior Planner

OFFICE USE ONLY

CITY OF AUBURN
Planning & Development Department
Auburn City Hall Annex, 2nd Floor
1 East Main Street
Auburn, Washington 98001-4998
Tel: 253.931.3090
Fax: 253.804.3114
permitcenter@auburnwa.gov
www.auburnwa.gov

FILE #: ______
FILE NAME: ______
TYPE: ______ RECEIVED BY: ______
FEES PAID: ______ CHECK/CASH: ______
SUBMITTAL DATE: ______
LAND USE DESIGNATION: ______

SEP12-0026

SEPA SUBMITTAL – APPLICATION

RECEIVED
AUG 29 2012
PERMIT CENTER

APPLICANT: ☒ *Use mailing address for meeting notification.* ☐ *Check box if Primary Contact*

COMPANY: Saybr Contractors, Inc. (Tank Removal Contractor)
ADDRESS: 3852 S 66th Street
(CITY, STATE, ZIP) Tacoma, WA 98409
PHONE: 253.531.2144 FAX: 253.536.2068 E-MAIL: mmuller@saybr.com

SIGNATURE: MMTM PRINTED NAME: Mike Muller, Project Manager
(Signature Required)

APPLICANT'S REPRESENTATIVE: ☒ *Check box if Primary Contact*

COMPANY: Muir Contracting, Inc.
ADDRESS: 1423 E 29th Street, Suite 311
(CITY, STATE, ZIP) Tacoma, WA 98409
PHONE: 253.882.4546 FAX: 253.559.5452 E-MAIL: agrindle@muircontracting.com

SIGNATURE: ______ PRINTED NAME: Amanda Grindle, Permit Coordinator
(Signature Required)

PROPERTY OWNER(S): ☐ *Attach separate sheet if needed.* ☐ *Check box if Primary Contact*

COMPANY: David Pollart
ADDRESS: 2102 W Valley Highway N
(CITY, STATE, ZIP) Auburn, WA 98101
PHONE: 253796.3900 FAX: ______ E-MAIL: dapol13@gmail.com

SIGNATURE: ______ PRINTED NAME: David Pollart
(Signature Required)

Note: Applicant or representative must have property owner's consent to file this application form in order for it to be accepted

PROPERTY INFORMATION (REQUIRED)

SITE ADDRESS: 2102 W Valley Highway N, Auburn, WA 98001

EXISTING USE OF SITE: Transit Warehouse.

ASSESSOR'S PARCEL ID#	LOT SIZE	ZONING DISTRICT
1221049034	259,008	M1

PROPOSED USE OF SITE: No change.

AREA TO DEVELOPED (s.f.): Not applicable. Area is not being developed. We are removing an underground storage tank. Affected area approximately 1,410 s.f.

CITY OF AUBURN WASHINGTON

CITY OF AUBURN
Planning & Development Department
Auburn City Hall Annex, 2nd Floor
1 East Main Street
Auburn, Washington 98001-4998
Tel: 253.931.3090
Fax: 253.804.3114
permitcenter@auburnwa.gov
www.auburnwa.gov

SEPA SUBMITTAL

SEPA SUBMITTAL – LETTER OF AUTHORIZATION

(A copy of this letter must be submitted for each property owner involved)

I, David Pollart declare under penalty of perjury under the laws of the State of Washington as follows;

1. I am the owner of the property that is the subject of the application.

2. I [ ] have not appointed anyone, *or* [X] have appointed Saybr Contractors, Inc., to act as my agent regarding this application.

3. All statements, answers, and information submitted with this application are true and correct to the best of my knowledge and belief.

4. I agree to hold the City of Auburn harmless as to any claim (including costs, expenses and attorney's fees incurred in the investigation of such claim) which may be made by any person, including the undersigned, and filed against the City of Auburn, but only where such claim arises out of the reliance of the City, including its officers and employees, upon the accuracy of the information provided to the City as part of this application.

5. I hereby grant permission for representatives of the City of Auburn and any other Federal, State, or local unit of government with regulatory authority over the project to enter onto my property to inspect the property, take photographs, and post public notices as required in connection with review of this application and for compliance with the terms and conditions of permits and approvals issued for the project.

Signature

David Pollart	08/27/12	Auburn, Washington
Printed Name	Date	City and State where signed

2102 W Valley Highway N

Auburn, WA 98101

Address

CITY OF AUBURN
Planning & Development Department
Auburn City Hall Annex, 2nd Floor
1 East Main Street
Auburn, Washington 98001-4998
Tel: 253.931.3090
Fax: 253.804.3114
permitcenter@auburnwa.gov
www.auburnwa.gov

SEPA SUBMITTAL – CONCURRENT APPLICATIONS

Please indicate whether you are submitting one or more concurrent applications with this application by checking one or more of the boxes below:

Type I Applications (administrative decisions made by the city which are not subject to environmental review under the State Environmental Policy Act [SEPA]):

- ☐ Administrative Use Permit
- ☐ Boundary Line Adjustment
- ☐ Boundary Line Elimination
- ☐ Building Permit
- ☐ Excavation Permit
- ☐ Floodplain Development Permit
- ☐ Grading Permit
- ☐ Home Occupation Permit
- ☐ Land Clearing Permit
- ☐ Mechanical Permit
- ☐ Plumbing Permit
- ☐ Public Facility Extension Agreement
- ☐ Right-of-way Use Permit
- ☐ Short Subdivision
- ☐ Special Permit
- ☐ Temporary Use Permit (administrative)
- ☐ Utility Permit

Type II Applications (administrative decisions made by the city which include threshold determinations under SEPA):

- ☐ Administrative Use Permit
- ☐ Building Permit
- ☐ Floodplain Development Permit
- ☐ Grading Permit
- ☐ Land Clearing Permit
- ☐ Public Facility Extension Agreement
- ☐ Short Subdivision

Type III Applications (quasi-judicial final decisions made by the hearing examiner following a recommendation by staff:

- ☐ Conditional Use Permit
- ☐ Preliminary Plat
- ☐ Special Exceptions
- ☐ Special Home Occupation Permit
- ☐ Substantial Shoreline Development Permit
- ☐ Surface Mining Permit
- ☐ Temporary Use Permit
- ☐ Variance

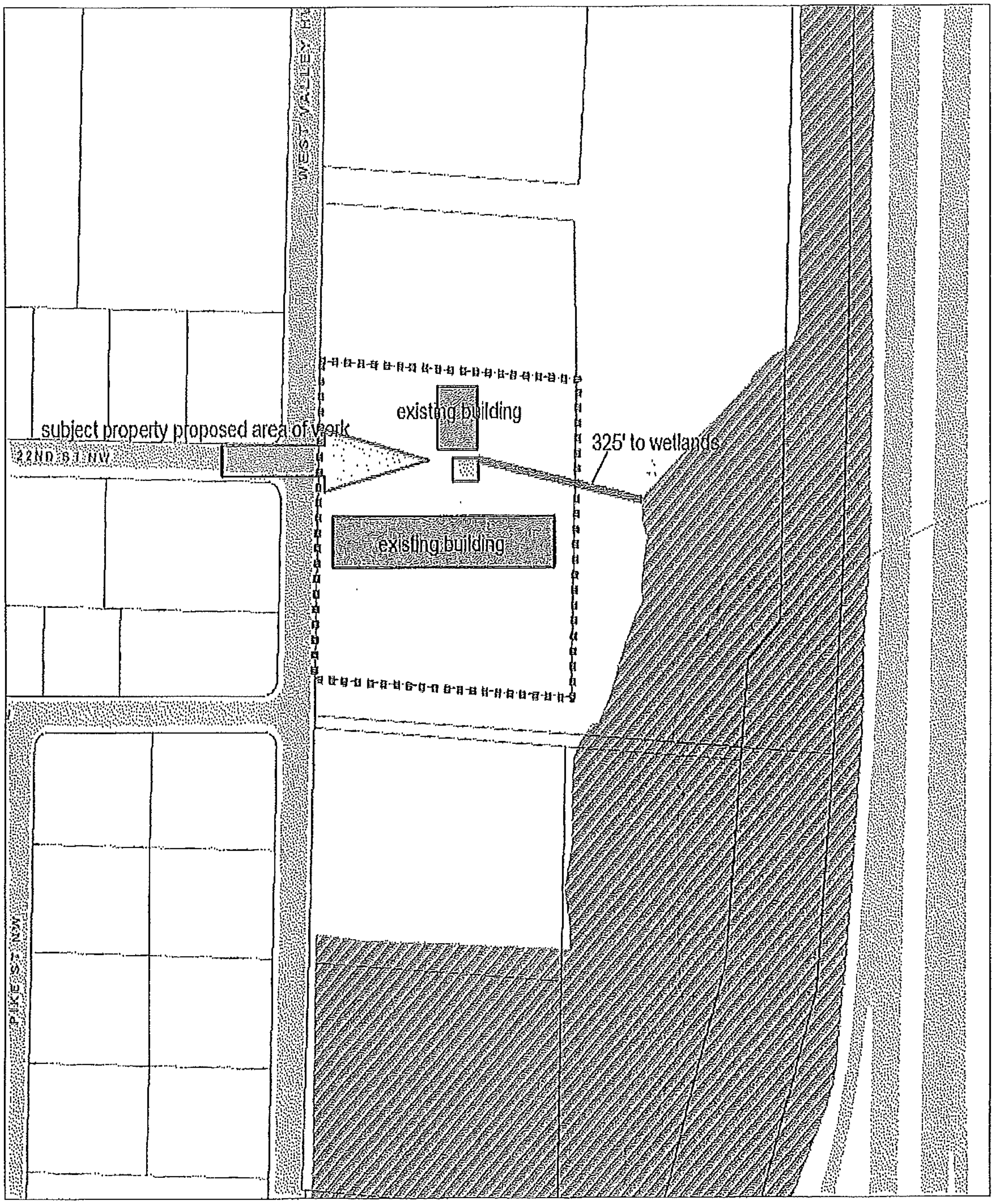
Type IV Applications (quasi-judicial decisions made by the city council following a recommendation by the hearing examiner):

- ☐ Rezone (site-specific)

OTHERS - as may apply:

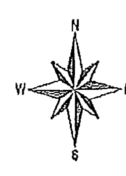
- ☐ SEPA
- ☐ SHORELINE EXEMPT
- ☒ Fire Permit - UST Removal
- ☐ ____________

SEP12-0026 Provisioners Express UST tank decommissioning (PID: 1221049034)



Printed Date:9/10/2012
Map Created by City of Auburn eGIS

Information shown is for general reference purposes only and does not necessarily represent exact geographic or cartographic data as mapped. The City of Auburn makes no warranty as to its accuracy.



DEPARTMENT OF ECOLOGY
State of Washington

UNDERGROUND STORAGE TANK (UST)
30-DAY NOTICE
(See back of form for instructions)

FOR OFFICE USE ONLY
Site ID #
FS ID #

COPY

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300

SITE INFORMATION

600-050-779 001 0002
Tag or UBI number

Provisioners Express (Site ID No. 101210)
Site Name

2102 W Valley Highway N
Site Physical Address

Auburn, WA 98001
City Zip Code

253.796.3900
Site Phone Number

OWNER INFORMATION
(this form will be returned to this address)

David Pollart
UST Owner/Operator

2102 W Valley Highway N
Mailing Address/PO Box

Auburn, WA 98001
City Zip Code

253.796.3000
Owner/Operator Phone Number

dapol13@gmail.com
Owner/Operator Email Address

TANK INFORMATION

Tank ID	Substance Stored	Capacity	Date Project is Expected to Begin	Comments:
1	Diesel	12,000-gal	10/22/2012	The City of Auburn is requiring that this project undergo SEPA review. The project will begin once a SEPA determination has been issued, which we expect to happen on or before 10/22/2012.

1) SERVICE PROVIDER INFORMATION – check the appropriate boxes

PLEASE NOTE: INDIVIDUALS PERFORMING UST SERVICES MUST BE ICC CERTIFIED OR HAVE PASSED ANOTHER QUALIFYING EXAM APPROVED BY THE DEPARTMENT OF ECOLOGY.

☐ Installer ☒ Decommissioner ☐ Site Assessor

Saybr Contractors, Inc.
Service Provider Company Name

Adam Inman
Certified Service Provider Name

5044195
ICC Certification #

Mike Muller, Project Manager
Contact Person

253.531.2144
Contact Phone Number

mmuller@saybr.com
Contact Email Address

RECEIVED
29 2012
CITY OF AUBURN
PERMIT CENTER

2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MORE THAN ONE PROVIDER) – check the appropriate boxes

☐ Installer ☐ Decommissioner ☐ Site Assessor

Service Provider Company Name

Certified Service Provider Name

ICC Certification #

Contact Person

Contact Phone Number

Contact Email Address

CITY OF AUBURN
Planning & Development Department
Auburn City Hall Annex, 2nd Floor
1 East Main Street
Auburn, Washington 98001-4998
Tel: 253.931.3090
Fax: 253.804.3114
permitcenter@auburnwa.gov
www.auburnwa.gov

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AUG 29 2012
CITY OF AUBURN
PERMIT CENTER

SEP12-0024

SEPA ENVIRONMENTAL CHECKLIST

1. Name of proposed project, if applicable: Provisioners Express Underground Storage Tank Removal

2. Name of Applicant: Provisioners Express, Inc. (Owner) and Saybr Contractors, Inc. (Contractor)

3. Address and phone number of applicant and contact person:
   A. Applicant: Amanda Grindle, Permit Coordinator   Agent (if applicable):
   for Saybr Contractors, Inc.
   Phone: 253.882.4546 Address: 3852 S 66th Street, Tacoma, WA 98409

4. Date checklist prepared: August 24, 2012

5. Agency requesting checklist: City of Auburn

6. Proposed timing or schedule (including phasing, if applicable): Tank to be removed upon issuance of SEPA determination, Fire Permit, and Department of Ecology notification. Removal to take place in one day. Entire project to be completed in approximately one week.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. Soil samples will be collected by a third-party environmental engineer during tank excavation. Soil sample results and detailed report will be submitted to the Washington State Department of Ecology as required by WAC Chapter 173-360 Underground Storage Tank Regulations.

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. No.

10. List any government approvals or permits that will be needed for your proposal, if known.
    Auburn Fire Department Tank Removal Permit, Washington Department of Ecology 30 Day Notice of UST Decommissioning

11. Give a 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 need not repeat those answers on this page. Excavate, remove, and dispose of one 12,000-gal underground storage tank. (Diesel in tank to be removed prior to tank removal). Restore concrete to match existing.

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. Street Address: 2102 W Valley Highway N, Auburn, WA 98001. Parcel No.: 1221049034. Quarter, Section, Township, Range: NW-12-21-4. Tank located at the following coordinates: Lat/Long 47 degrees 19'35.3"/-122 degrees14'57.4". Site Plan, Vicinity Map, and Legal Description attached.

ENVIRONMENTAL ELEMENTS

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)? Less than one percent slope.

   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. Unknown - site is fully paved.

   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. Tank excavation to be backfilled with clean excavation spoils. Approximately 50 cubic yards of imported Type 17 pit-run and 4" of crushed rock will be placed to sugrade.

   F. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. Minimal erosion could occur during excavation and soil stockpile.

   G. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? 100% (tank area is currently covered with concrete and concrete will be replaced after tank removal).

   H. Proposed measures to reduce or control erosion, or other impacts to the earth. Catch basin protection equipment and silt fence will be installed prior to excavation activities. Stockpiled soil will be placed on Visqueen and covered with Visqueen while waiting for soil sample results.

2. 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 know. During tank removal, minimal dust and emissions from equipment could occur. After removal - none.

B. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe. No.

C. Proposed measures to reduce or control emissions or other impacts to air, if any: Appropriate dust control measures to be used during excavation activities, including using water to wet down area, if necessary. Vehicles and equipment will be equipped with appropriate emissions control equipment.

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 surface water body on the site. Seasonal, unnamed stream is located directly south of the parcel, approximately 425 feet from tank.

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.

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. Not applicable.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. No.

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.

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.

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 any toxic 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) is (are) expected to serve. None.

C. Water Runoff (including storm water)

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. None.

2) Could waste materials enter ground or surface waters? If so, generally describe. No.

D. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any
Not applicable.

4. Plants

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

- ☒ Deciduous Tree: Alder, Maple, Aspen, Other
- ☐ Evergreen Tree: Fir, Cedar, Pine, Other
- ☒ Shrubs
- ☐ Grass
- ☐ Pasture
- ☐ Crop or Grain
- ☐ Wet Soil Plants: Cattail, Buttercup, Bullrush, Skunk Cabbage, Other
- ☐ Water Plants: Water Lily, Eelgrass, Milfoil, Other
- ☐ Other Types of Vegetation

B. What kind and amount of vegetation will be removed or altered? None.

C. List threatened or endangered species known to be on or near the site: None.

D. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: Not applicable.

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, other: geese, ducks, crows, etc.
- Mammals: deer, bear, elk, beaver, other:
- Fish: bass, salmon, trout, herring, shellfish, other:

B. List any threatened or endangered species known to be on or near the site. None.

C. Is the site part of a migration route? If so, explain. No.

D. Proposed measures to preserve or enhance wildlife, if any: Not applicable.

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.
   Not applicable. Project is to remove an underground storage tank.

   B. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. No.

   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: Not applicable.

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.
   Fire and/or explosion hazard could be present during tank removal activities.

   1) Describe special emergency services that might be required: Fire Department will be notified prior to tank removal to conduct safety inspection.

   2) Proposed measures to reduce or control environmental health hazards, if any: Tank will be inerted prior to removal by a certified Marine Chemist. All tank removal activities will be supervised by an ICC-certified UST Decommissioning Supervisor.

8. Noise
   A. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? None.

   B. 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. Short-term equipment noise will occur during tank removal activities. Construction to take place between the hours of 7:00 a.m. and

   C. Proposed measures to reduce or control noise impact, if any: Noise-reducing mufflers will be in place on all equipment and vehicles.

9. Land and Shoreline Use
   A. What is the current use of the site and adjacent properties? Site is currently used as a transit warehouse and office.

B. Has the site been used for agriculture? If so, describe: Unknown.

C. Describe any structures on the site: Transit Warehouse and Office (approximately 28,085 SF), Transit Maintenance Building (approximately 7,280 SF)

D. Will any structures be demolished? If so, what? No.

E. What is the current zoning classification of the site? M1 - Light Industrial District

F. What is the current comprehensive plan designation of the site? M1 - Light Industrial District

G. If applicable, what is the current shoreline master program designation of the site? Not applicable.

H. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify: No.

I. Approximately how many people would reside or work in the completed project? Not applicable. Project is to remove an underground storage tank.

J. Approximately how many people would the completed project displace? Not applicable. Project is to remove an underground storage tank.

K. Proposed measures to avoid or reduce displacement impacts, if any: Not applicable.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: Not applicable. Project is to remove an underground storage tank.

HOUSING

A. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. Not applicable.

B. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. Not applicable.

C. Proposed measures to reduce or control housing impacts, if any: Not applicable.

AESTHETICS

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

B. What views in the immediate vicinity would be altered or obstructed? Not applicable.

C. Proposed measures to reduce or control aesthetic impacts, if any: Not applicable.

LIGHT AND GLARE

1. What type of light or glare will the proposal produce? What time of day would it mainly occur? Not applicable.

2. Could light or glare from the finished project be a safety hazard or interfere with views? Not applicable.

3. What existing off-site sources of light or glare may affect your proposal? Not applicable.

4. Proposed measures to reduce or control light and glare impacts, if any: Not applicable.

RECREATION

1. What designated and informal recreational opportunities are in the immediate vicinity? None.

2. Would the proposed project displace any existing recreational uses? If so, describe. No.

3. Proposed measures to reduce or control impacts on recreation including recreation opportunities to be provided by the project or applicant, if any: Not applicable.

HISTORIC AND CULTURAL PRESERVATION

1. 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: No.

2. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site. Not applicable.

3. Proposed measures to reduce or control impacts, if any: Not applicable.

TRANSPORTATION

1. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. West Valley Highway North is located directly west of the site and serves as access to the site. Highway 167 is located to the East of the site.

2. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? King County Metro (Route 152) currently serves the site from downtown Seattle.

3. How many parking spaces would the completed project have? How many would the project eliminate? No parking spaces are being either created or eliminated as part of this project.

4. 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): No.

5. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe: No.

6. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. Not applicable.

7. Proposed measures to reduce or control transportation impacts, if any: Not applicable.

PUBLIC SERVICES

1. 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: Not applicable.

2. Proposed measures to reduce or control direct impact on public services, if any: Not applicable.

UTILITIES

1. Circle utilities currently available at the site:
   Sewer, Water, Power

2. 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: Not applicable.

SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

OWNER/AGENT SIGNATURE: AG Amanda Grindle, Permit Coordinator for Saybr Contractors, Inc.

DATE SUBMITTED: 08/29/12

SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS
(Do not use this sheet for project action)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent of the proposal, or the types of activities likely to result from the proposal that would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   A. Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   A. Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   A. Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   A. Proposed measures to protect such resources or to avoid or reduce impacts are:

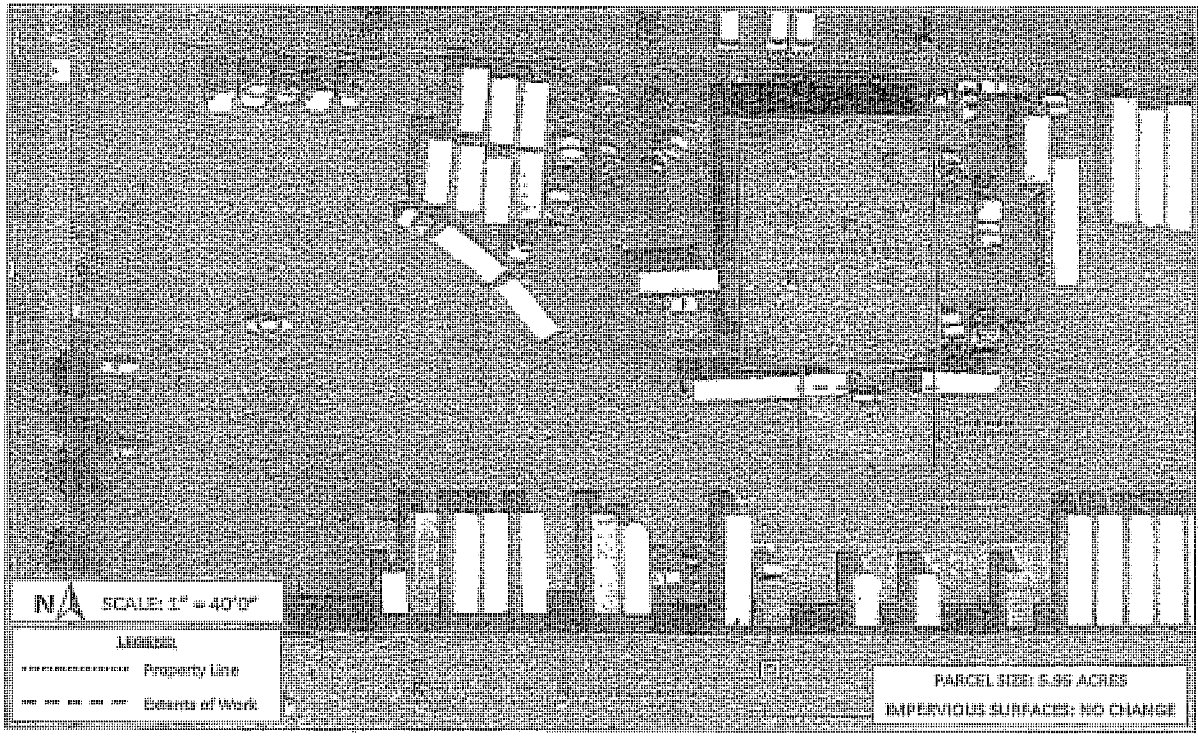
5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   A. Proposed measures to avoid or reduce shoreline and land use impacts are:

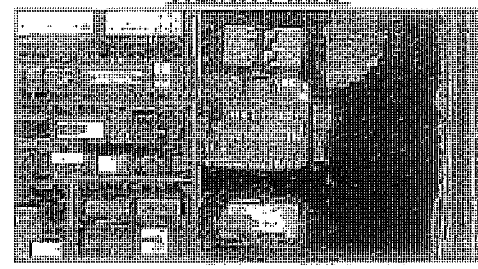
6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   A. Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.



VICINITY MAP



SCOPE OF WORK

- Perform underground locate of the excavation area.
- Install temporary fencing for site safety and security.
- Remove and properly dispose of existing card reader located on concrete island.
- Sawcut, demolish and remove concrete as necessary to remove the UST.
- Excavate and expose top of UST.
- Complete a triple rinse of the tank and remove and properly dispose of up to four inches of residual diesel from the tank.
- Inert the tank utilizing the services of a third party Marine Chemist.
- Excavate, remove, and properly dispose of one 12,000-gallon double wall, fiberglass UST. (All tank removal activities to be supervised by an ICC-certified UST Supervisor).
- Cut and cap any underground piping at the edge of the excavation.
- Cut and cap the above ground vent riser at grade level.
- Backfill with clean excavation spoils, imported Type 17 pit-run, and 4" of crushed rock to sub-grade.
- Replace concrete to match existing.

SITE PLAN

FOR PERMITTING PURPOSES ONLY

Contractor: Saybr Contractors, Inc.
Address: 3852 S 66th Street, Tacoma, WA 98409
Phone: (253) 531-2144
Fax: (253) 536-2068
Contact: Mike Muller, (253) 531-2144

Owner: Provisioners Express, Inc.
Address: 2102 W Valley Highway N, Auburn, WA 98101
Phone: (253) 796-3900
Fax:
Contact: David Pollart, President

Provisioners Express
UST Removal

2102 W Valley Highway N
Auburn, WA 98001

PARCEL #1221049034

LEGAL DESCRIPTION: LOT 3 & POR OF LOT 2 AUB SP 3-86 REC #8606050397 DAF - NW 1/4 OF NW 1/4 LESS W 30 FT FOR RD #69 & LESS E 6 FT OF W 36 FT FOR RD #68 LESS ST AS ADJUSTED BY AUB LLA - 11-87 REC #8706221496 AKA LOT 3 AUB LLA 15-86 REC #8611131947

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   A. Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

Attachment C

City of Auburn Permit

CITY OF AUBURN WASHINGTON

Building Permit

City of Auburn Building Division

FPC021902ek

Permit #: FIR12-0105 | Date Issued: 11/8/2012 | Expiration Date: 11/8/2014

APPLICANT	CONTRACTOR	FINANCING SOURCE / LENDER
SAYBR CONTRACTORS INC 3852 S 66TH ST, TACOMA WA TACOMA, WA 98409-2408 2535312144	SAYBR CONTRACTORS INC 3852 S 66TH ST, TACOMA WA TACOMA, WA 98409-2408 2535312144	
OWNER	**LICENSING**	**BONDING AGENCY**
POLLART DAVID 715 2ND AVE #1902 SEATTLE, WA 98104	Contractor Lic#: SAYBRCI033L7 Lic Expiration: 6/14/2010 STATE TAX #: 601795367	

Site Address: 2102 WEST VALLEY HWY N | Parcel: 1221049034

Description of work: PROVISIONERS: REMOVAL OF 12.000 GALLON UST

NO. OF STORIES	BASEMENT	USE OF BUILDING
LOT COVERAGE	DECK/PORCH	OCC GROUP
1st FLOOR	GARAGE/ACCY	REMODEL
2nd FLOOR	MEZZANINE	MOBILE HOME
3rd FLOOR	SPRINKLER REQ	VACANT SITE
4th FLOOR		
5th FLOOR	# OF UNITS/BLDGS	
6th FLOOR		PERMIT VALUATION 0.00

FEES

TYPE	AMOUNT	PAID	BY	RECEIPT#
VRFA FEE SCHEDULE	200.00	200.00		454535
TOTALS	200.00	200.00	BALANCE DUE:	0.00

NOTES AND / OR CONDITIONS

1) This permit does not constitute approval or compliance with the rules, regulations, or requirements of any other jurisdiction, which may relate to the above project.

2) The City Of Auburn requires electrical services installed underground.

THE APPLICANT HEREBY AGREES TO ALL ABOVE STIPULATIONS.

OWNER / APPLICANT | 11/8/12 DATE

FOR FIRE INSPECTIONS, PHONE (253) 288-5800 48HRS IN ADVANCE.

ALL OTHER INSPECTIONS: (253) 931-3020 (OPTION 3) BY 3:30PM FOR NEXT DAY INSPECTIONS (excluding weekends & holidays).

NOTICE:
Contractors must call (253) **931-3020** for all inspections **

CITY OF AUBURN

RECORDS OF INSPECTION

NOTICE:
Post this card conspicuously on construction site.

EXCEPT FIRE SPRINKLERS AND GASOLINE PIPING CALL 931-3060

BUILDING:	**Pmt.#**	Date
Pier Pads	Date	By
Footing	Date	By
Fnd. Wall	Date	By
Slab	Date	By
Dwn spt drain	Date	By
Fnd. Drain	Date	By
Underfloor	Date	By
Shear Nailing:		
Ext Wall	Date	By
Int Wall	Date	By
Roof	Date	By
GWB	Date	By
Frame	Date	By
Insulation:	Date	By
Slab	Date	By
Floor	Date	By
Fl/Ceil assy	Date	By
Ceiling	Date	By
Walls	Date	By
Ceiling Grid	Date	By
Fire Wall	Date	By
Final	Date	By
REROOF:	**Pmt#**	Date
Preroof	Date	By
FINAL	Date	By
MOBILE HOME:	Pmt#	Date
Tie Downs	Date	By
Block	Date	By
Heat Duct	Date	By

PLUMBING: Pmt.#	Date	
Water Service	Date	By
Underground:		
Drainage Waste Vent	Date	By
Water	Date	By
Rough In:		
Gas Pipe	Date	By
Drainage Waste Vent	Date	By
Water	Date	By
FINAL	Date	By
Cross Connect Control Final	Date	By
SEWER: #Pmt	Date	
FINAL	Date	By
STORM: #Pmt	Date	By
Connection	Date	By
FINAL	Date	
MECHANICAL: Pmt.#	Date	By
Gas Pipe	Date	By
Duct Installation	Date	By
Duct Insulation	Date	By
Vents:		
Exhaust	Date	By
B Vents	Date	By
FINAL		
SIGNS: Pmt.#	Date	
Footing	Date	By
FINAL	Date	By

MOBILE HOME PLUMBING	Pmt#	Date
Sewer	Date	By
FINAL	Date	By

SITE PREPARATION: **EROSION CONTROL IN PLACE** Date By

Fill	Pmt. #	Date	Landscape	Bond#	Date
FINAL	Date	By	FINAL	Date	By
Grading	Pmt. #	Date	Demo	Pmt. #	Date
FINAL	Date	By	FINAL	Date	By

FIRE DEPARTMENT INSPECTIONS CALL (253) 931-3060

FIRE DEPT:	Pmt.#	Date
Fire Sprinklers:	Date	By
Undrgrnd OK to Cvr	Date	By
Undrgrnd Hydro	Date	By
Underground Flush	Date	By
Aboveground Hydro	Date	By
Head Placement	Date	By
Final Flow/Alarm	Date	By
Seismic Bracing	Date	By
Fuel Storage Tanks:	Date 11/28/12	By DBW
Gasoline Piping	Date	By
Hydrant Acceptance	Date	By

Hood/Duct Ext Sys	Pmt.#	Date
Function Test	Date	By
Fire Alarm System	Pmt.#	Date
Inspection Date		By
Misc.	Pmt.#	Date
Inspection Date		By
OK for Temporary C.O. by Fire		
Date		By
Fire Department FINAL		
Date 11/28/12		By DBW

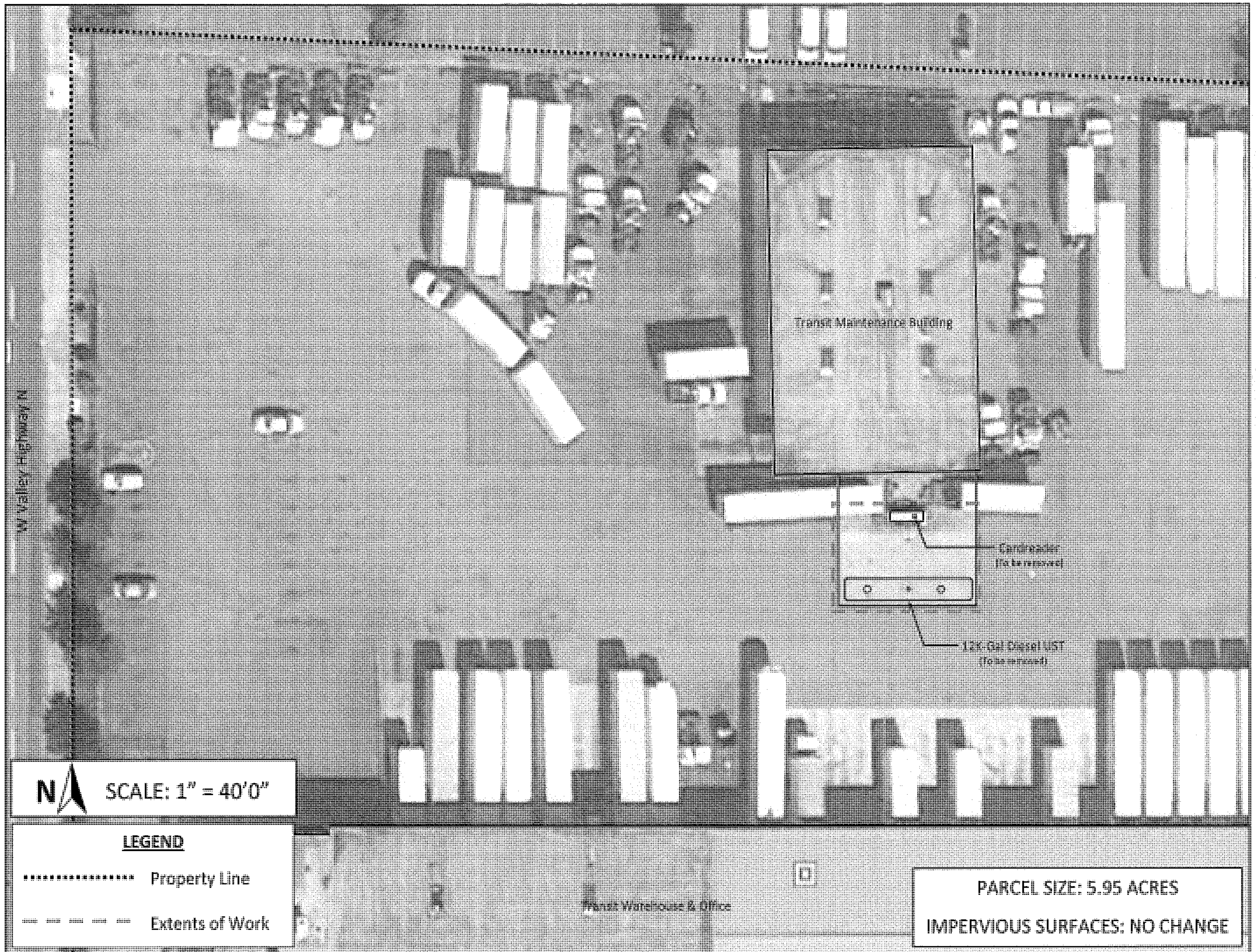
For Commercial Occupancy call City of Auburn Permit Center at 253-931-3020

COMMENTS: UST Removed DBW

****

WARNING: Occupancy prior to all applicable FINAL INSPECTIONS is prohibited.
Violations are subject to penalty fines equal to the original permit amount.

REF. H:\FORMS\FB029 (4-10)



VICINITY MAP

SCOPE OF WORK

- Perform underground locate of the excavation area.
- Install temporary fencing for site safety and security.
- Remove and properly dispose of existing card reader located on concrete island.
- Sawcut, demolish and remove concrete as necessary to remove the UST.
- Excavate and expose top of UST.
- Complete a triple rinse of the tank and remove and properly dispose of up to four inches of residual diesel from the tank.
- Inert the tank utilizing the services of a third party Marine Chemist.
- Excavate, remove, and properly dispose of one 12,000-gallon double wall, fiberglass UST. (All tank removal activities to be supervised by an ICC-certified UST Supervisor).
- Cut and cap any underground piping at the edge of the excavation.
- Cut and cap the above ground vent riser at grade level.
- Backfill with clean excavation spoils, imported Type 17 pit-run, and 4" of crushed rock to sub-grade.
- Replace concrete to match existing.

SITE PLAN

FOR PERMITTING PURPOSES ONLY

Contractor: Saybr Contractors, Inc.
Address: 3852 S 66th Street, Tacoma, WA 98409
Phone: (253) 531-2144
Fax: (253) 536-2068
Contact: Mike Muller, (253) 531-2144

Owner: Provisioners Express, Inc.
Address: 2102 W Valley Highway N, Auburn, WA 98101
Phone: (253) 796-3900
Fax:
Contact: David Pollart, President

Provisioners Express
UST Removal

2102 W Valley Highway N
Auburn, WA 98001

PARCEL #1221049034

LEGAL DESCRIPTION: LOT 3 & POR OF LOT 2 AUB SP 3-86 REC #8606050397 DAF - NW 1/4 OF NW 1/4 LESS W 30 FT FOR RD #69 & LESS E 6 FT OF W 36 FT FOR RD #68 LESS ST AS ADJUSTED BY AUB LLA - 11-87 REC #8706221496 AKA LOT 3 AUB LLA 16-86 REC #8611131947

Attachment D

UST Cleaning Certification and Water Disposal Bill of Lading

21210622 [illegible] Auburn Estes Trucking
TANK cleaning

PRS Group, Inc.

To: ______Saybr Contractors Inc.____

THIS LETTER IS TO CERTIFY THAT PRS GROUP INC. HAS STRIPPED TANK CONTENTS AND RINSED INTERIOR (TANKS LISTED BELOW) IN ORDER TO ALLOW TANKS TO BE INERTED.

DATED THIS_27th___ DAY OF _November 2012____________

AUTHORIZED SIGNATURE : ________________________________
KEN LISOSKI PRS

SITE: Estes Trucking
2102 W. Valley Hwy. Auburn, Wa.

1 - 12.00 gallon u.s.t. diesel

3003 Taylor Way E. • Tacoma, Washington 98421
Phone (253) 383-4175 • Fax (253) 383-4531 • Email prs@prsplant.net • Web www.prsplant.net

STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

PRS Group, Inc.

3003 Taylor Way • Tacoma, WA 98421 • (253) 383-4175

Shipper No. ____________

Invoice 6068

Date 11-27-12

TO:
Consignee: PRS GROUP
Street 3003 TAYLOR WAY
City TACOMA State WA Zip 98421

FROM:
Shipper: SAYBR
Street 2102 W VALLEY HWY N
City AUBURN State WA Zip 98001

ROUTE

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA) per 172.101, 172.202, 172.203	TOTAL QUANTITY Weight, Volume, Gallons, etc.	PRICE PER UNIT	TOTAL $
1T		RINSE WATER FROM	50		
		TANK			
		2121062			
		Tank cleaning			
		Triple Rinse Day 1			
		EMERGENCY RESPONSE GUIDE ON BOARD TRUCK			

PLACARDS TENDERED: YES ☐ NO ☒ IN CASE OF AN EMERGENCY, SPILL OR LEAK USE EMERGENCY RESPONSE GUIDE #

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

_______________ Signature

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of the Bill of Lading, the property described above in apparent good order, except as noted (contents and conditions of contents packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification of the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER SAYBR

PER LEE

RECEIVED BY

CARRIER *PRS Group, Inc.*

PER KEN LISECKI DATE 11-27-12

DATE 11-27-12

white - OFFICE yellow - CUSTOMER pink - OFFICE gold - BOOK

STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

PRS Group, Inc.

3003 Taylor Way • Tacoma, WA 98421 • (253) 383-4175

Shipper No.

Invoice 6069

Date 11-28-12

TO:
Consignee: PRS GROUP
Street 3003 TAYLOR WAY
City TACOMA State WA Zip 98421

FROM:
Shipper: SAYBR
Street
City AUBURN State WA Zip

ROUTE

Vehicle Number 110

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA) per 172.101, 172.202, 172.203	TOTAL QUANTITY Weight, Volume, Gallons, etc.	PRICE PER UNIT	TOTAL $
1 T		RINSE WATER FROM TANK	250		
		Tank Cleaning Day 2			
		EMERGENCY RESPONSE GUIDE ON BOARD TRUCK			

PLACARDS TENDERED: YES ☐ NO ☒ IN CASE OF AN EMERGENCY, SPILL OR LEAK USE EMERGENCY RESPONSE GUIDE #

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

_______________ Signature

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of the Bill of Lading, the property described above in apparent good order, except as noted (contents and conditions of contents packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification of the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER SAYBR

PER CEF

RECEIVED BY

DATE 11-28-12

CARRIER *PRS Group, Inc.*

PER

DATE 11-28-12

white - OFFICE yellow - CUSTOMER pink - OFFICE gold - BOOK

STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

PRS Group, Inc.

3003 Taylor Way • Tacoma, WA 98421 • (253) 383-4175

Shipper No. ________

Invoice 6070

Date 11-30-12

TO:
Consignee: PRS GROUP
Street 3003 TAYLOR WAY
City TACOMA State WA Zip 98421

FROM:
Shipper: SAYBR
Street
City AUBURN State WA Zip

ROUTE

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA) per 172.101, 172.202, 172.203	TOTAL QUANTITY Weight, Volume, Gallons, etc.	PRICE PER UNIT	TOTAL $
1 T		GROUND WATER	1500		
		2121062-17010			
		Dewater Tank Hole			
		Per Greg McCormick Email			
		EMERGENCY RESPONSE GUIDE ON BOARD TRUCK			

PLACARDS TENDERED: YES ☐ NO ☒ IN CASE OF AN EMERGENCY, SPILL OR LEAK USE EMERGENCY RESPONSE GUIDE #

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

________ Signature

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of the Bill of Lading, the property described above in apparent good order, except as noted (contents and conditions of contents packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification of the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER SAYBR
PER LEE
RECEIVED BY

CARRIER *PRS Group, Inc.*
PER DATE 11-30-12
DATE 11-30-12

white - OFFICE yellow - CUSTOMER pink - OFFICE gold - BOOK

Attachment E
Marine Chemist Certificate

Northwest Marine Chemist, Inc.
George Blair
P.O. Box 7084
Tacoma, WA 98417
(253) 752-0149

MARINE CHEMIST CERTIFICATE

SERIAL NO. ST-1246

SAYBR Contractors	Estes Express Lines	November 28, 2012
Survey Requested by	Vessel Owner or Agent	Date
TANK FARM	Underground Storage Tank	2202 W. Valley Hwy N Auburn
Vessel	Type of Vessel	Specific Location of Vessel
Diesel Fuel	O2 - LEL - Visual	1030 Hrs.
Last Three (3) Cargoes	Test Method	Time Survey Completed

1 = 12,000 gal UST
Ex. Diesel
Oxygen: 5.2%
LEL: N/A

Secured
Not Safe For Workers
Safe For Limited Hotwork

Limitations: This Tank Has been purged to <6% Oxygen and is Safe for excavation and Cutting of Access.

END

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

STANDARD SAFETY DESIGNATIONS

SAFE FOR WORKERS: Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

NOT SAFE FOR WORKERS: Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

ENTER WITH RESTRICTIONS: Means that in any compartment or space so designated, entry for work may be made only if conditions of proper protective equipment, clothing, and time are as specified.

SAFE FOR HOT WORK: Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted.

NOT SAFE FOR HOT WORK: Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

CHEMIST'S ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in the condition of each to be in accordance with its assigned designation.

This Certificate is based on conditions existing at the time the inspection herein set forth was and is issued subject to compliance with all qualifications and instructions.

Signed [signature] SAYBR Cont Env 11/28/12
Name Company Date

Signed [signature] #637
Name Certificat No.

Attachment F

Underground Storage Tank Closure and Site Assessment Notice and Site Check/Site Assessment Checklist Form

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY
Site #: ______
Facility Site ID #: ______

INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): 9161212I (VCP NW 2532)

Site/Business Name: Estes Express Trucking

Site Address: 2102 West Valley Highway North (Street) Telephone: ( )______

Auburn (City) Washington (State) 98001 (Zip Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
UST #1	12,000-gallons	Diesel Fuel

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

______ Investigate suspected release due to on-site environmental contamination.
______ Investigate suspected release due to off-site environmental contamination.
______ Extend temporary closure of UST system for more than 12 months.
______ UST system undergoing change-in-service.
GMC ✓ UST system permanently closed with tank removed.
______ Abandoned tank containing product.
______ Required by Ecology or delegated agency for UST system closed before 12/22/88.
______ Other (describe): ______

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	GMC	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	GMC	
3. A summary of UST system data is provided. (see Section 3.1.)	GMC	
4. The soils characteristics at the UST site are described. (see Section 5.2)	GMC	
5. Is there any apparent groundwater in the tank excavation?	GMC	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	GMC	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	GMC	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	GMC	
- groundwater samples distinguished from soil samples (if applicable)	GMC	
- samples collected from stockpiled excavated soil	GMC	
- tank and piping locations and limits of excavation pit	GMC	
- adjacent structures and streets	GMC	
- approximate locations of any on-site and nearby utilities	GMC	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	GMC	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	GMC	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	GMC	

12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	GMC	

SITE ASSESSOR INFORMATION

Greg McCormick — Person registered with Ecology

Environmental Partners, Inc. — Firm Affiliated with

Business Address: 295 NE Gilman Blvd. #201 (Street) Telephone: (425) 395-0010

Issaquah (City) Washington (State) 98027 (Zip Code)

WA Site Assessor No. 105243-U7

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

12/3/12 — Date

[signature] — Signature of Person Registered with Ecology

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Closure and Site Assessment Notice

FOR OFFICE USE ONLY
Site ID #: ____________
Facility Site ID #: ____________

See back of form for instructions

Please ✓ the appropriate box(es)
☐ Temporary Tank Closure ☐ Change-In-Service ☑ Permanent Tank Closure ☐ Site Check/Site Assessment

Site Information

Site ID Number 9161212
(Available from Ecology if the tanks are registered)
Site/Business Name Estes Express
Site Address 2102 West Valley Hwy N.
Street
City/State Auburn, WA
Zip Code 98001 Telephone (___) ________

Owner Information

UST Owner/Operator Mr. David Pollart
Mailing Address P. O. Box 896
Street
P.O. Box
City/State Seattle, WA
Zip Code 98111 Telephone (206) 948-1330

Owners Signature ____________

Tank Closure/Change-In-Service Company

Service Company Saybr Contractors
Certified Supervisor LEE DALN
Decommissioning Certification No. 1136590
Supervisor's Signature [signature] Date 12/10/12
Address 3852 S 66th Street
Street P.O. Box
TACOMA, WA 98409
City State Zip Code
Telephone (206) 730-1853

Site Check/Site Assessor

Certified Site Assessor Environmental Partners, Inc. (Greg McCormick)
Address 295 NE Gilman Blvd
Street P.O. Box
Issaquah WA 98027
City State Zip Code
Telephone (425) 922-6392

Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
UST#1	11/28/12	Removal	12,000 gal	Diesel

Contamination Present at the Time of Closure

☑ Yes ☐ No ☐ Unknown

Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☑ Yes ☐ No

If contamination is present, has the release been reported to the appropriate regional office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY)

ECY 020-94 (Rev. 2-06)

Instructions

AFTER COMPLETING THIS FORM, RETURN TO:

TOXICS CLEANUP PROGRAM
DEPARTMENT OF ECOLOGY
P.O. BOX 47655
OLYMPIA, WA 98504-7655

Please Read Carefully

This form is to be completed by the tank owner and submitted to Ecology within 30 days of tank closure. Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-In-Service require a site assessment be performed.

Site and Owner Information

Fill in the site and owner information. Include the Ecology site number, if known; also, be sure to provide telephone numbers so that any problems can be resolved quickly. **The tank owner MUST sign this form.**

Tank Closure/Change-In-Service Company and Site Check/Site Assessor

List the closure company and fill in the site assessor information for permanent closure or change-in-service. Ask to see the closure company supervisor's ICC Certification and make sure that the certified supervisor signs this form.

Please note: **Individuals performing services MUST be certified by the International Code Council (ICC), or other nationally recognized association by which they demonstrate appropriate knowledge pertaining to USTs or have passed another qualifying exam approved by the Department.**

Tank Information and Contamination Present at Time of Closure

Please fill in the tank information requested using tank ID numbers previously reported to Ecology. In the column entitled "Closure Method," indicate what manner of closure was used, such as closure in place or removal. Check the appropriate box(es) indicating if contamination is present and has been reported. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours [see below for telephone numbers]. **If contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, then this form, a site assessment checklist, and a site assessment report must be submitted to the above address within 30 days.**

Central	**Eastern**	**Southwest**	**Northwest**
(509) 575-2490	(509) 329-3400	(360) 407-6300	(425) 649-7000

The following tanks are exempt from notification requirements:

- Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.
- Tanks used for storing heating oil that is used on the premises where the tank is located.
- Tanks with a capacity of 110 gallons or less.
- Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- Emergency overflow tanks, catch basins, or sumps.

For more information, call toll free in the state of Washington 1-800-826-7716 (Message).

Attachment G

UST Disposal Certification

SAYBR CONTRACTORS, INC.
3852 S. 66th St. | Tacoma, WA 98409
P: 253.531.2144 F: 253.536.2068

Certificate of Underground Storage Tank Disposal

UST Owner/Operator: David Pollart

Washington State Department of Ecology UBI Number: 600-050-779-001-0002

Site/Business Name: Provisioners Express

Site Address: 2102 W Valley Hwy N
Auburn, WA. 98001

Tank Information

Tank ID	Closure Date	Tank Capacity
1	11/28/2012	12k- gallons

Disposal Method
Via Excavator 200-crushed, put into 40yd Waste Management container-transported and disposed by Waste Management.

This form certifies that Saybr Contractors, Inc. properly disposed of the above listed tank(s).

Saybr Contractors, Inc.

Michael T. Muller
Project Manager

Attachment H

Analytical Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

December 3, 2012

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes Express Auburn WA

Dear Mr. McCormick:

Included are the results from the testing of material submitted on November 28, 2012 from the Estes Express Auburn WA, F&BI 211454 project. There are 6 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
EPI1203R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 28, 2012 by Friedman & Bruya, Inc. from the Environmental Partners Estes Express Auburn WA, F&BI 211454 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
211454-01	Stockpile 1
211454-02	Stockpile 2
211454-03	Stockpile 3
211454-04	West End
211454-05	West Bottom
211454-06	North Sidewall
211454-07	South Sidewall
211454-08	East Bottom
211454-09	East End
211454-10	UST 1 Water

All quality control requirements were acceptable.

Date of Report: 12/03/12
Date Received: 11/28/12
Project: Estes Express Auburn WA, F&BI 211454
Date Extracted: 11/29/12
Date Analyzed: 11/29/12

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 50-150)
Stockpile 1 211454-01	<50	<250	114
Stockpile 2 211454-02	<50	<250	123
Stockpile 3 211454-03	<50	<250	122
West End 211454-04	<50	<250	125
West Bottom 211454-05	230	<250	126
North Sidewall 211454-06	<50	<250	126
South Sidewall 211454-07	<50	<250	123
East Bottom 211454-08	<50	<250	127
East End 211454-09	<50	<250	126
Method Blank 02-2193 MB2	<50	<250	110

Date of Report: 12/03/12
Date Received: 11/28/12
Project: Estes Express Auburn WA, F&BI 211454
Date Extracted: 11/28/12
Date Analyzed: 11/28/12

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)
UST 1 Water 211454-10	55,000	790 x	83
Method Blank 02-2198 MB	<50	<250	108

Date of Report: 12/03/12
Date Received: 11/28/12
Project: Estes Express Auburn WA, F&BI 211454

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

Laboratory Code: 211437-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	119	115	73-135	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	116	74-139

Date of Report: 12/03/12
Date Received: 11/28/12
Project: Estes Express Auburn WA, F&BI 211454

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	113	129	58-134	13

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

211454

SAMPLE CHAIN OF CUSTODY

ME 11-28-12 D04

Send Report To Greg McCormick
Company EPI
Address 295 NE Gilman ~~Ave~~ Blvd
City, State, ZIP Issaquah, WA
Phone # (425) 922-6392 Fax #

SAMPLERS (signature) [signature]
PROJECT NAME/NO. Estes Express Auburn, WA
PO #
REMARKS 24 hour TAT

Page # 1 of 1
TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

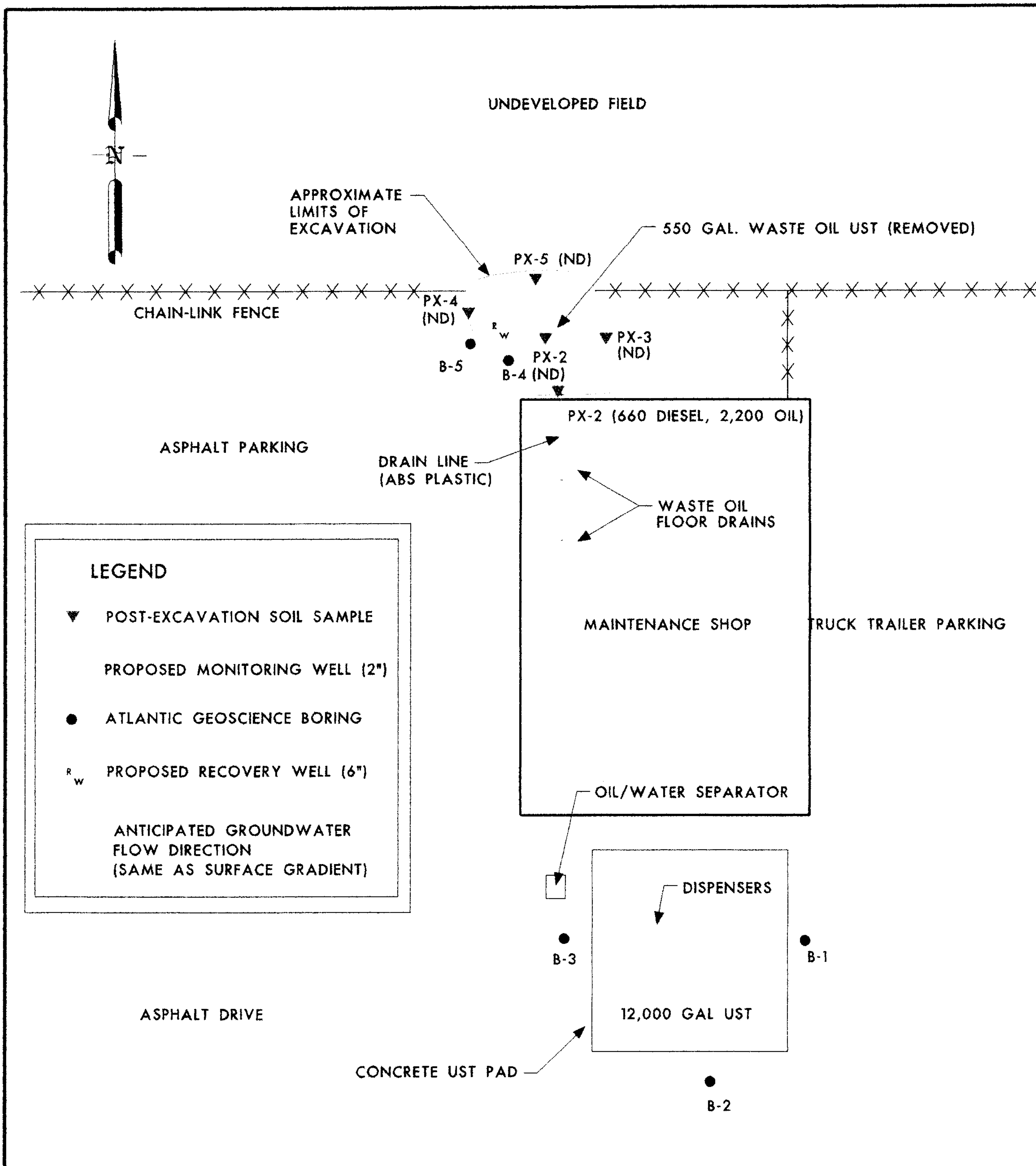
SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
Stockpile #1	01	11/28/12	11:30	S	1	X											
Stockpile #2	02		11:35	S	1	X											
Stockpile #3	03		11:45	S	1	X											
West End	04		1:15	S	1	X											
West Bottom	05		1:30	S	1	X											
North Sidewall	06		1:00	S	1	X											
South Sidewall	07		1:10	S	1	X											
East Bottom	08		1:45	S	1	X											
East End	09		1:25	S	1	X											
UST #1 Water	10		12:00	W	1	X											

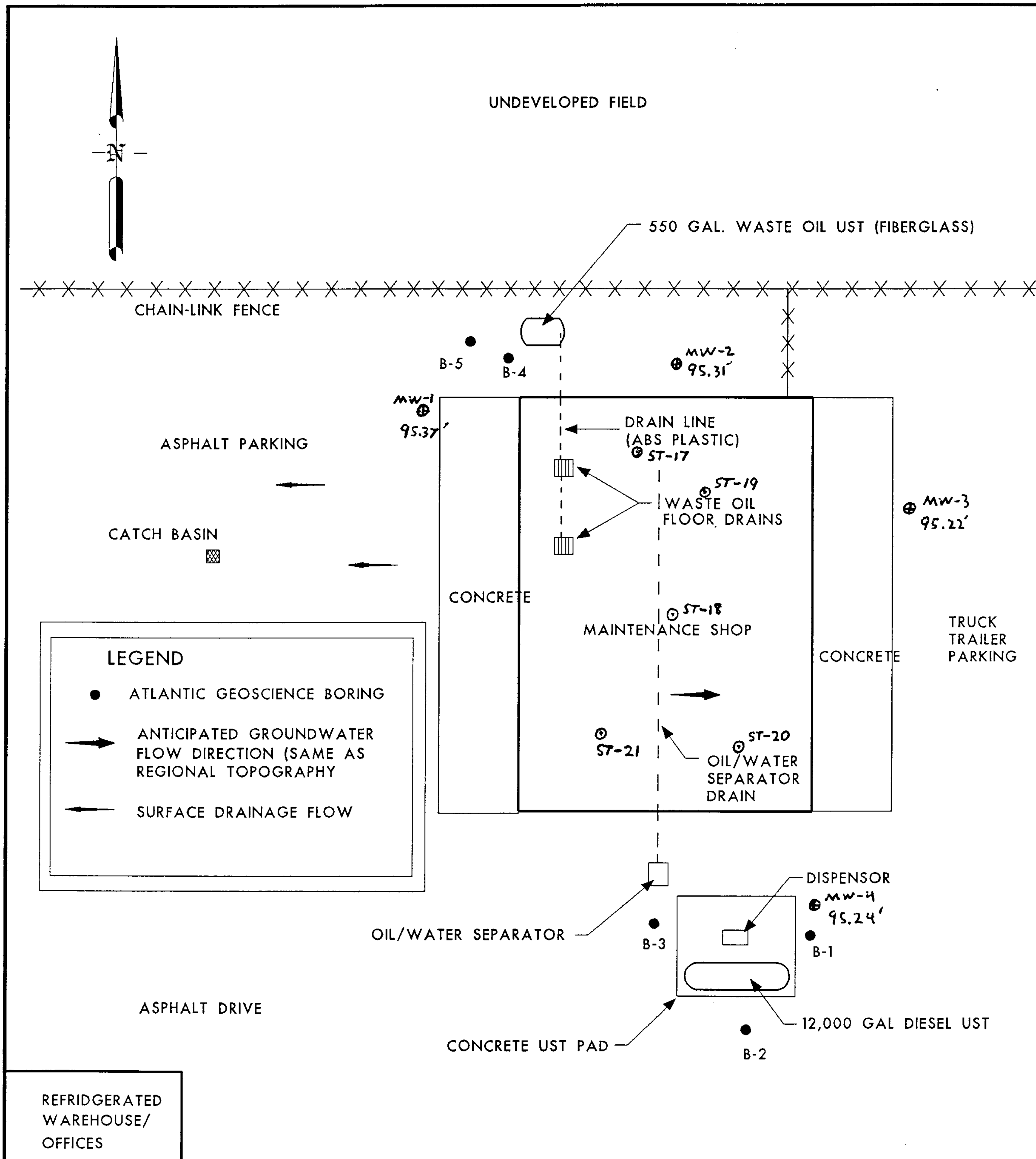
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Greg McCormick	EPI	11/28/12	3:00
Received by:	[signature]	Nhan Phan	FeBT	11/28/12	3:00
Relinquished by:					
Received by:					

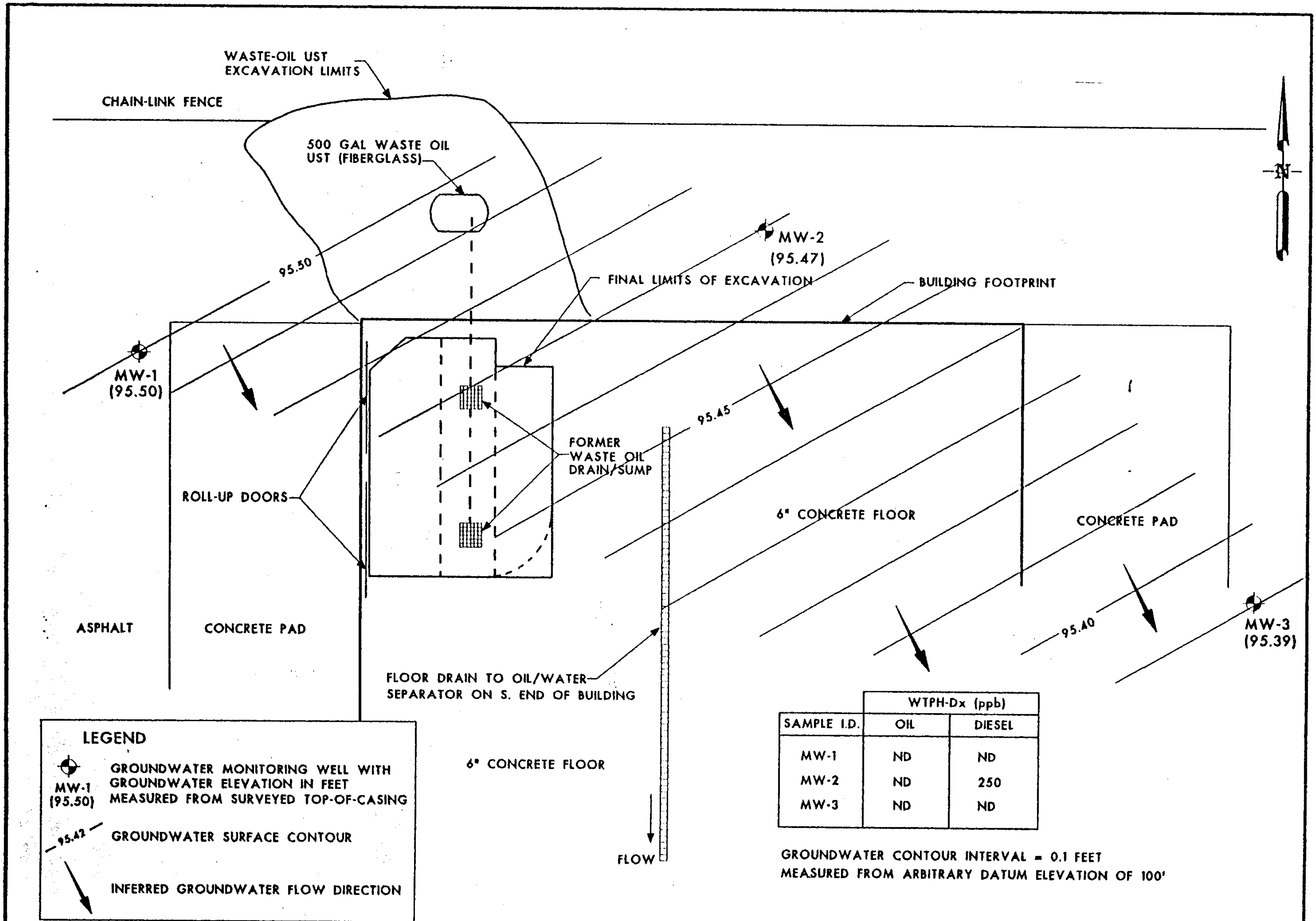
Samples received at 9 °C



EMR INCORPORATED	Provisioners Express, Inc. Groundwater Characterization	Drawn By: DLW	Date: 10/28/98	FIGURE 1
	2102 West Valley Hwy Auburn, Washington Proposed Well Location Map	Checked By: GMC	Scale: No Scale	
		Project #: 3613-02	File Name: 3613-02.gcd	



EMR INCORPORATED	Provisioners Express, Inc. Independent Remedial Action 2102 West Valley Hwy Auburn, Washington Site Features Map	Drawn By: DLW Checked By: DC Project #: 3613	Date: 1/6/98 Scale: No Scale File Name: 3613fig2.gcd	FIGURE 2



	WTPH-Dx (ppb)	
SAMPLE I.D.	OIL	DIESEL
MW-1	ND	ND
MW-2	ND	250
MW-3	ND	ND

GROUNDWATER CONTOUR INTERVAL = 0.1 FEET
MEASURED FROM ARBITRARY DATUM ELEVATION OF 100'

0 20
SCALE IN FEET

EMR INCORPORATED

Provisioners Express, Inc.
Data Summary Report

2102 West Valley Hwy
Auburn, Washington
Groundwater Gradient Map 1-5-99

Drawn By:	DLW	Date:	1/7/99
Checked By:	DC	Scale:	No Scale
Project #:	3613	File Name:	3613.gcd

FIGURE
6

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 11, 2017

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Notice of Periodic Review Conducted at the following Hazardous Waste Site:

- Name: Provisioners Express Inc. (aka. Estes West)
- Address: 2102 W Valley Hwy N, Auburn, WA
- Cleanup Site ID.: 6847
- Facility/Site No.: 91612121

Dear Mr. Pollart:

The Model Toxics Control Act, Chapter 70.105D Revised Code of Washington, which governs the cleanup of hazardous waste sites in Washington State, requires the Department of Ecology to conduct a periodic review of sites with institutional controls (covenants) and an opinion letter every five years. This letter serves to inform you that a periodic review has been conducted at the Provisioners Express Inc. (Site).

The periodic review process includes the following steps:

1. review cleanup information including any recent monitoring data,
2. confirmation that the covenant is active and recorded with the title to the property,
3. visit the Site to confirm the institutional controls and conditions of the covenant are effective.

The Site appears to meet the requirements of Chapter 173-340 Washington Administrative Code based on the information examined during this periodic review, and the selected remedy is protective of human health and the environment. A periodic review will be required every five years as long as institutional controls and/or a covenant are required to protect human health and the environment. The next periodic review will be due in 2021.

Please call me at 425-649-7191 if you have any questions regarding this letter or if you would like additional information regarding the cleanup of hazardous waste sites.

Sincerely,

Eugene Freeman
Toxics Cleanup Program

Enclosures: 1 (Periodic Review Document)

PERIODIC REVIEW

Provisioners Express
Facility Site ID#: 91612121

2102 West Valley Highway North,
Auburn, Washington

Northwest Region Office

TOXICS CLEANUP PROGRAM

December 2016

DEPARTMENT OF
ECOLOGY
State of Washington

PERIODIC REVIEW

Provisioners Express
Facility Site ID#: 91612121

**2102 West Valley Highway North,
Auburn, Washington**

Northwest Region Office

TOXICS CLEANUP PROGRAM

December 2016

1.1 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup Site conditions and monitoring data to ensure that human health and the environment are being protected at the Provisioners Express (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program. The cleanup actions resulted in concentrations of petroleum related compounds, waste oil, and metals remaining at the Site which exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720. WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a Site every five years under the following conditions:

(a) Whenever the department conducts a cleanup action
(b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
(c) Or, as resources permit, whenever the department issues a no further action opinion, and one of the following conditions exists:

1. Institutional controls or financial assurance are required as part of the cleanup;
2. Where the cleanup level is based on a practical quantitation limit; or
3. Where, in the department"s judgment, modifications to the default equations or assumptions using Site-specific information would significantly increase the concentration of hazardous substances remaining at the Site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

(a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site;
(b) New scientific information for individual hazardous substances of mixtures present at the Site;
(c) New applicable state and federal laws for hazardous substances present at the Site;
(d) Current and projected Site use;
(e) Availability and practicability of higher preference technologies; and
(f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The Department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site Description and History

Provisioners Express, later Provisioners Transportation is a 6-acre property located at 2102 West Valley Highway North in Auburn, Washington. The Site included one main refrigerated warehouse building, a maintenance garage, and parking areas, one diesel (12,000-gallons) underground storage tank (UST) with associated pump island, one waste oil UST (550-gallons), and an oil-water separator. Several aboveground storage tanks (ASTs) used to store oils and propane gas as well as an AST for a waste-oil burning heater were located inside the maintenance garage. Historical research of the Site and adjacent properties indicated that the area was undeveloped until mid 1980's. Provisioners Express, Inc., a refrigerated goods carrier and distribution company, was the only Site tenant since 1988. Adjacent properties in the Site vicinity consisted of business park developments and small manufacturing.

The majority of the Site consists of concrete or asphalt pavement surrounding the Site buildings and loading docks. The topography of the Site and vicinity are relatively flat with an elevation of approximately 65-feet above mean sea level, (USGS 1973). Mill Creek and the White River Park Wetland System are the nearest surface water bodies located at the southeast adjacent property, approximately 500-feet southeast of the Site. The Green River is located approximately 2 miles east of the Site.

The Soil Survey of King County Area, Washington (SCS 1973) classifies the soil in the Site vicinity as the Norma sandy loam part of the Norma Series. The Norma series is made of poorly drained soils formed in alluvium under sedges, grasses, conifers, and hardwoods. The Norma sandy loam occurs in strips 25 to 300 feet wide with slopes of less than 2 percent. In a typical soil profile, the A-horizon ranges from black to very dark brown sandy loam with as much as 15 percent gravel and the B-horizon is typically a sandy loam in places stratified with a silt loam and loamy sand with as much as 35 percent gravel in places. In areas near northwestern Auburn, some Norma soils have an organic layer as thick as 12-inches. Permeability is moderately high and the seasonal water table is at or near the surface. The unit is characterized by a moderately high to high available water capacity, slow runoff and slight erosion hazard. Soils are mostly used for pasture and, in drained areas, for row crops.

The geologic strata which underlies the Site consists of gravel and sand depoSited in the Quaternary period (less than 1.6 million years ago [Mullineaux 1965]). This unit is part of the Frazier Glaciation, which represents the last glaciation in the south Puget Sound. Sediments of this unit consist of deposits of sand and gravel depoSited by the White River and reworked by the Green River (Mullineaux 1965).

The surface of the Site is relatively level with deep drainage channels along the north and south sides of the Site. The drainage channel identified along the south boundary of the Site was observed flowing to the White River Park Wetland System located on the southeast adjacent property. Based on topography and surface features, shallow groundwater at the Site would be expected to flow towards these drainage channels surrounding the Site, towards the wetlands, and towards Mill Creek running north-south east of the Site. Groundwater was encountered at a depth of 4.5 to 5 feet below ground surface (bgs) and flowing to the southeast, as estimated from limited subsurface investigation conducted at the Site and data from existing groundwater monitoring wells.

2.2 Site Investigations and Sample Results

Atlantic Geoscience, Inc. (AGI) conducted a Phase I ESA of the Provisioners property on behalf of a prospective buyer in September 1998. The Phase I also included a limited subsurface investigation in which 5 soil borings were advanced in the vicinity of the diesel and waste-oil USTs in order to assess any potential releases from them. Three borings B-1 to B-3 were advanced in the vicinity of the diesel UST and oil-water separator, and two (B-4 and B-5 within the excavation and removed thereafter) in the vicinity of the waste-oil UST. Soil and groundwater samples collected from four of these borings were analyzed for hydrocarbon identification (WTPH-HCID) analyses. However, during drilling of soil boring B-4, free product (as oil) was encountered at approximately 6-feet bgs. Therefore, no soil or groundwater samples were collected from this boring. Analytical results from soil samples collected from the soil borings around the diesel UST and B-5 indicated no hydrocarbons were present in soils at these locations. However, all groundwater samples collected contained oil, gasoline, and diesel-range hydrocarbons above MTCA Action levels for gasoline range, diesel range, and motor oil range organics (AGI 1998).

A push-probe investigation was also conducted at the end of November 1998 to delineate the extent of the oil seeps inside the garage. Environmental Management Resources" (EMR"s) subcontractor advanced 16 push-probes from which ten subsurface soil samples were analyzed for oil and diesel range hydrocarbons by the NWTPH-Dx method. Selected samples were also analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and gasoline range hydrocarbons by the NWTPH-G/BTEX methods. Analytical results of these soil samples indicated that concentrations above MTCA Method A Soil Cleanup Levels for oil, diesel, mineral spirits and xylene remained beyond the extent of the excavation inside the maintenance garage.

EMR installed three groundwater monitoring wells (MW-1 through MW-3) at the Site in December 1998. EMR sampled the wells and analyzed the groundwater samples for oil and diesel range hydrocarbons using the NWTPH-Dx method. No concentrations of diesel or motor oil were detected from analytical results of groundwater samples collected from MW-1 and MW-3; however, concentrations of 250 micrograms per liter (ug/L) of gasoline range hydrocarbons and BTEX compounds were present at MW-2. Except for MW-2, none of the samples contained concentrations above MTCA Method A Cleanup Levels for TPH for groundwater (EMR 1999e). An additional groundwater monitoring well, MW-4 was installed early in 1999.

EMR conducted another round of groundwater sampling in addition to collecting a surface water sample from a ditch north of the UST excavation in April 1999, based on recommendations by Ecology. All samples were analyzed for gasoline and diesel range hydrocarbons and BTEX and the surface water sample was also analyzed for diesel range hydrocarbons. Analytical results from these samples indicated no detectable concentrations of gasoline or BTEX were present in the surface water sample. Xylene was the only reported exceedance to MTCA Method A cleanup levels in groundwater at monitoring well MW-2 (EMR 1999e). The report also presented the results of five additional push-probes advanced at the Site. The letter indicated that these probes were advanced in order to calculate interim TPH parameters in soil. An EMR report for the fourth round of groundwater sampling conducted September 1999 at the Site indicated that Benzene at MW-2 exceeded the MTCA Method A Groundwater Cleanup Level (EMR 1999e).

The Independent Remedial Action Report (EMR 1999d) also indicates exceedances of the Method A cleanup levels for mineral spirits/stoddard solvents, which were present with concentrations up to 4000 milligrams per kilogram (mg/kg).

Roy F. Weston, Inc. (WESTON®) completed a Pre-Lease Assessment consisting of a Phase I environmental Site assessment (ESA) and limited subsurface investigation. WESTON was engaged by US West Communications, Inc. (US West) to conduct the assessment and investigation in accordance with the American Society for Testing and Materials (ASTM) E 1527-97 guidelines and US West specifications. The principal objective of this assessment was to identify potential environmental liabilities associated with the present and historical use of the property, physical condition of the grounds, existing operational practices, and potential impacts from surrounding areas as set forth in a proposal submitted to US West dated 18 November 1999. The purpose of the limited subsurface investigation was to address known existing contamination at the property, and to evaluate the current conditions of soil and groundwater in these problem areas. The information presented in that report was obtained from a review of property records and previous environmental investigations, a reconnaissance of the Site and interviews with the property owner and regulatory officials, and collection of soil and groundwater samples for chemical analyses.

Two open excavations were observed during the Site reconnaissance; one outside the northwest corner of the maintenance garage, and one inside the northwest corner of the maintenance garage. Based on conversations with the Site owner and documents reviewed at the Site, both excavations are related to contamination found from improperly installed lines and sump from floor drains inside the building leading into a waste-oil UST. According to a previous Phase I ESA and limited Site investigation (AGI 1998), free product was found in a soil boring advanced in the vicinity of the 550-gallon waste-oil UST, which led to the excavation of the UST. After the tank"s removal, more contamination was found underneath the building. The owner excavated inside the building by removing the concrete floor slab, floor drains, and excavating the contaminated soil. Both excavations were filled with clean gravel, and the UST, which appeared to be in good condition, was nested into the gravel and covered. The UST was not re-installed and neither the drain line nor floor drains were re-connected. Some heavy oil-like stains were observed on the garage north wall and gravel fill in the waste-oil tank excavation area.

A 12,000-gallon diesel UST and associated pump island were identified at the exterior southeast corner of the maintenance garage. Heavy staining of the concrete floor was observed around the pump-island. However, no sheen was observed in rainwater running towards a floor drain located immediately south of the pump, which is reportedly connected to the oil-water separator.

WESTON conducted a limited subsurface investigation in the vicinity of the waste-oil UST and the diesel UST on 13 November. Soil samples were collected using push-probe technology at sampling locations GP001 through GP004. An additional soil sample was collected from GP005 based on field observations. Sample locations were selected in close proximity to the 12,000-gallon diesel UST, the 550-gallon waste oil UST and the location of the former floor drains inside the maintenance building. Soil samples were collected at continuous three-foot intervals to a depth of nine feet bgs. The samples were screened in the field based on visual staining and odor. One sample from each boring was selected for laboratory analysis based on the field screening results. Samples selected for laboratory analysis were submitted to Analytical Resources, Inc. (ARI) to be analyzed for total petroleum hydrocarbons in the diesel extended range (NWTPH-Dx), total petroleum hydrocarbons in the gasoline range (TPH-G), and volatile organic compounds (VOC). The sample collected from GP005 was only analyzed for NWTPH-Dx. Both fill materials and native soils were observed during soil sampling. Fill materials were typically encountered to approximately 8.5 feet and consisted of tightly compacted, brown and gray, coarse grained sand and gravel. Beneath the fill, native soil was encountered as a thin layer of brown silt with high organic content approximately one foot thick. This brown silt layer was observed in GP003, GP004 and GP005. In GP004, gray fine and medium grained sand was encountered beneath the brown silt layer. GP004 was the only push-probe location advanced through the silt.

Pea gravel from the bed of the 12,000-gallon diesel UST was encountered at 2.5 feet bgs in GP001. As soil samples could not be collected from the pea gravel, a new location approximately ten feet to the south, GP005, was selected to complete the investigation at depth.

NWTPH-Dx was detected in all five samples submitted for analysis. Detected concentrations ranged from 13 mg/kg in GP002 at 3 feet bgs to 160 mg/kg in GP004 at 6 feet bgs. The hydrocarbon source in GP001 was identified as motor oil. None of the other samples had a chromatographic pattern matching that of diesel or motor oil. The MTCA Method A soil cleanup standard for diesel-range TPH is 200 mg/kg.

TPH-G was detected in one sample, GP004 at 6 feet bgs, at a concentration of 32 mg/kg. The detected gasoline-range petroleum hydrocarbons did not have a chromatogram that matched the pattern for fresh gasoline. However, the petroleum hydrocarbons appear to be severely weathered gasoline or other light petroleum products. The MTCA Method A soil cleanup level for gasoline range TPH-G is 100 mg/kg.

Four volatile organic compounds (VOCs) (2-butanone, acetone, carbon disulfide, and methylene chloride) were detected in one or more soil samples. The combination of VOCs detected may indicate the presence of carburetor cleaner as a source. However, acetone and methylene chloride are common laboratory contaminants, though they were not detected in the method blank. Of the VOCs detected only methylene chloride has a MTCA Method A soil cleanup standard. None of the samples had detected methylene chloride concentrations above the MTCA Method A soil cleanup standard of 500 ug/kg. 2-Butanone was detected in GP004 at 6 feet bgs at a concentration of 39 ug/kg. Acetone was detected in three samples at concentrations ranging from

14 ug/kg in GP003 at 6 feet bgs to 150 ug/kg in GP004 at 6 feet bgs. Carbon disulfide was detected in GP004 at 6 feet bgs at a concentration of 1.3 ug/kg. Methylene chloride was detected in three samples at concentrations ranging from 3.9 ug/kg in GP003 at 6 feet bgs to 7.1 ug/kg in GP002 at 3 feet bgs.

Four groundwater samples were submitted to ARI for laboratory analysis. All samples submitted were analyzed for NWTPH-Dx, TPH-G, and VOC, except for the sample from GP004, which was only analyzed for TPH-G and VOC.

Acetone was detected above the MTCA Method B 100 times groundwater soil cleanup level of 80 mg/kg in GP004 at a concentration of 140 mg/kg. Methylene chloride was detected above the MTCA Method B 100 times groundwater carcinogen soil cleanup level of 0.58 mg/kg in GP002, GP003, and GP004. The MTCA Method B 100 times groundwater carcinogen soil cleanup level for methylene chloride is lower than the laboratory detection limit for GP001.

NWTPH-Dx was detected in all three samples submitted for TPH-Dx analysis. Detected concentrations ranged from 0.59 mg/L in GP002 to 2.2 mg/kg in GP001. None of the other samples had a chromatographic pattern matching that of diesel or motor oil. The MTCA Method A groundwater cleanup level for TPH was 1 mg/L.

TPH-G was detected in one sample, MW-2, at a concentration of 0.44 mg/L. The detected gasoline-range petroleum hydrocarbons did not have a chromatogram that matched the pattern for fresh gasoline. However, the petroleum hydrocarbons appear to be severely weathered gasoline or other light petroleum products. The MTCA Method A groundwater cleanup level for TPH was 1 mg/L.

Twelve VOCs were detected in one or more groundwater samples. With the exception of a detection of acetone in GP002 all of the VOC detections occurred in MW-2 and GP004. Benzene was the only VOC detected at concentrations above the MTCA Method A groundwater cleanup levels. Benzene was detected at concentrations above the MTCA Method A standard (5 ug/L) in GP004 at 19 ug/L and in MW-2 at 26 ug/L.

Benzene was detected above the MTCA Method B groundwater cleanup level of 1.51 ug/L in MW-2 and GP004. The combination of VOCs detected in GP004 may indicate the presence of carburetor cleaner, gasoline or petroleum based solvents. Benzene, toluene, ethylbenzene and m-, p- and o-xylenes (BTEX) as well as seven other VOCs were detected in GP004.

2.3 Cleanup Actions

In October 1998, EMR, the owners" subcontractor, conducted UST closure assessment activities on the waste-oil UST. EMR indicated that it was evident that an unknown volume of free oil had drained into the soils and backfill surrounding the tank from a 4-inch drain-line sheared off approximately 2-3 feet from the tank drain hole (EMR 1998). The drain-line was connected to two floor drains and sumps inside the maintenance garage. Approximately 350-cubic yards of contaminated soil were excavated. EMR collected post excavation samples following the removal of the impacted soil. Analytical results of soil samples collected after the excavation of contaminated soils indicated that the bottom as well as the north, east, and west sidewalls of the excavation showed no detection of motor oil or diesel range hydrocarbons. The results indicated that contamination with motor oil range at 660 milligrams per kilogram (mg/kg) and diesel range at 2,200 mg/kg hydrocarbons still persisted on the south sidewall of the excavation. A follow-up tracer dye test conducted on the drain line confirmed the drain line had leaked (EMR 1 999c).

On 3 November 1998, EMR returned to the Site to excavate a trench inside the building below both floor drains/sumps and along the drain line. EMR reported localized oil seeps at approximately 3-4 feet bgs on the trench sidewalls. After excavating the impacted soil, EMR collected 11 soil samples along the sidewalls and bottom of the completed excavation and analyzed them with the NWTPH-DX method. Analytical results from these samples indicated that concentrations above the MTCA Method A Soil Cleanup Levels remained along the sidewalls of the trench and at least in one area of the trench bottom (EMR 1999c).

Groundwater samples were collected using push-probe technology from GP001, GP002 and GP004. A groundwater sample was not collected from GP003 due to insufficient groundwater yield. Instead, a groundwater sample was collected from nearby monitoring well MW-2. Push-probe groundwater samples were collected through a four-foot screen using dedicated polyethylene tubing and a peristaltic pump. Groundwater at time of drilling was encountered between 4.5 and 5 feet bgs. The push-probe screen was advanced from 4 to 8 feet bgs to ensure capture of floating product, if any existed.

Monitoring well MW-2, located on the north side of the maintenance building was sampled in lieu of a push-probe groundwater sample from GP003. MW-2 has a total depth of 15 feet bgs and is screened from 5 to 15 feet bgs. The purge water had a sheen and a mild petroleum odor. The sample collected from MW-2 was submitted to ARI for TPH-Dx, TPH-G, and VOC analysis. Groundwater level measurements were collected from MW-1 through MW-4. Depth to groundwater was measured with a steel tape.

Although most of the source of contamination (impacted soil) has been removed, there is still a significant amount of contaminated soil in place under the floor, north wall and foundation of the maintenance building located on the northeast portion of the Property (EMR 1999d). The removal of this impacted soil was limited as its removal may affect the structural integrity of the building. In addition, the fact that groundwater and subsurface soil show detected concentrations of BTEX and other VOC compounds at GP-004 and MW-2 (which is cross-gradient from the excavation), raised several questions regarding an additional source in this area.

Ecology agreed with the protectiveness of the cleanup pertaining to waste oil and metals released into the soil and groundwater, and issued a „No Further Action" letter on January 20, 2000, after a restrictive covenant was recorded with the county. The letter required additional groundwater monitoring presumably because benzene in groundwater was still above MTCA standards.

Groundwater monitoring was conducted quarterly until 2003, when the frequency was reduced to annually. The last monitoring event in Ecology's records was in August 2003. Benzene levels still exceeded Method A standards.

2.4 Cleanup Levels

MTCA Methods A and B standards have been referenced to set cleanup levels and the conditional points of compliance and to measure protectiveness.

2.5 Restrictive Covenant

Based on the Site use, surface cover and cleanup levels, it was determined that the Site was eligible for a „No Further Action" determination for the soil cleanup if a Restrictive Covenant was recorded for the property. A Restrictive Covenant was recorded for the Site in 1999 which imposed the following limitations:

Section 1.
1. The Property shall be used only for traditional industrial uses, as described in RCW 70.105D. 020(23) and defined in and allowed under the City of Auburn zoning regulations as of the date of this Restrictive Covenant.
2. No groundwater may be taken for any use from the Property.
3. Any activity on the Property that may interfere with the ongoing monitoring of groundwater wells is prohibited.
4. A portion of the Property contains TPH contaminated soil located under the floor, north wall and foundation of the maintenance building located on the northeast portion of the Property, as described in the reports listed above. The Owner shall not alter, modify, or remove the existing structure of the maintenance building in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.
Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
Section 4. The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner"s intent to convey any interest in the Property. No conveyance of title, easement, lease or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.
Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.
Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.
Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

The Restrictive Covenant is available as Appendix 6.4.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits activities that will result in the release of contaminants at the Site without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Restrictive Covenant serves to ensure the long term integrity of the remedy.

Based upon the Site visit conducted on June 30, 2016, the remedy at the Site continues to eliminate exposure to contaminated soils by ingestion and contact. The remedy appears in satisfactory condition and no repair, maintenance, or contingency actions have been required. The Site is still operating as a trucking facility. A photo log is available as Appendix 6.5.

Soils with TPH and metals concentrations higher than MTCA cleanup levels are still present at the Site. However, the remedy prevents human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant for the property will ensure that the contamination remaining is contained and controlled. The groundwater has not been verified as cleaned up.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new scientific information for the contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

The cleanup at the Site was governed by Chapter 173-340 WAC (1996 ed.). WAC 173-340-702(12) (c) [2001 ed.] provides that,

"A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment."

Although cleanup levels changed for petroleum hydrocarbon compounds as a result of modifications to MTCA in 2001, those changes do not appear to have affected this cleanup. Contamination remains at the Site above the new MTCA Method A and B cleanup levels. Even so, the cleanup action is still protective of human health and the environment. A table comparing MTCA cleanup levels from 1991 to 2001 is available below.

Analyte	1991 MTCA Method A Soil Cleanup Level (ppm)	2001 MTCA Method A Soil Cleanup Level (ppm)	1991 MTCA Method A Groundwater Cleanup level (ppb)	2001 MTCA Method A Groundwater Cleanup Level (ppb)
Cadmium	2	2	5	5
Lead	250	250	5	15
TPH	NL	NL	1000	NL
TPH-Gas	100	100/30	NL	1000/800
TPH-Diesel	200	2000	NL	500
TPH-Oil	200	2000	NL	500

NL = None listed

3.4 Current and projected Site use

The Site is currently used for commercial purposes. There have been no changes in current or projected future Site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection below selected Site cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

The following conclusions have been made as a result of this periodic review:

- The cleanup actions completed at the Site appear to be protective of human health, but not the environment, since groundwater has not been verified as cleaned up.

- Soils cleanup levels have not been met at the standard point of compliance for the Site; however, the cleanup action has been determined to comply with cleanup standards since the long-term integrity of the containment system is ensured, and the requirements for containment technologies are being met.

- The Restrictive Covenant for the property is in place and continues to be effective in protecting public health from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant continue to be met. No additional cleanup actions are required by the property owner at this time, although groundwater is being monitored. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the remedy is maintained.

4.1 Next Review

The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

1. Report titled "Phase I Environmental Assessment, Provisioners Terminal, Auburn, Washington", prepared for Watkins Terminals, Inc., by Atlantic Geosciences, Inc., and dated September 14, 1998;

2. Report titled "Remedial Investigation/Feasibility Study", prepared for Provisioners Express Auburn Facility, by Environmental Management Resources, Inc. (EMR), Redmond, WA., and dated March, 1999;

3. Report titled "Results of Interim TPH Analysis, Groundwater Monitoring and Stream Sampling, Provisioners Express Facility, Auburn, WA., prepared for Provisioners Express Auburn Facility by EMR, and dated April 20, 1999;

4. Report titled "Pre-Lease Assessment, Provisioners Warehouse, 2102 West Valley Highway North, Auburn, Washington", prepared for US West Communication, Inc., Seattle, WA., by Roy F. Weston, Inc., Seattle, WA., and dated December 2, 1999;

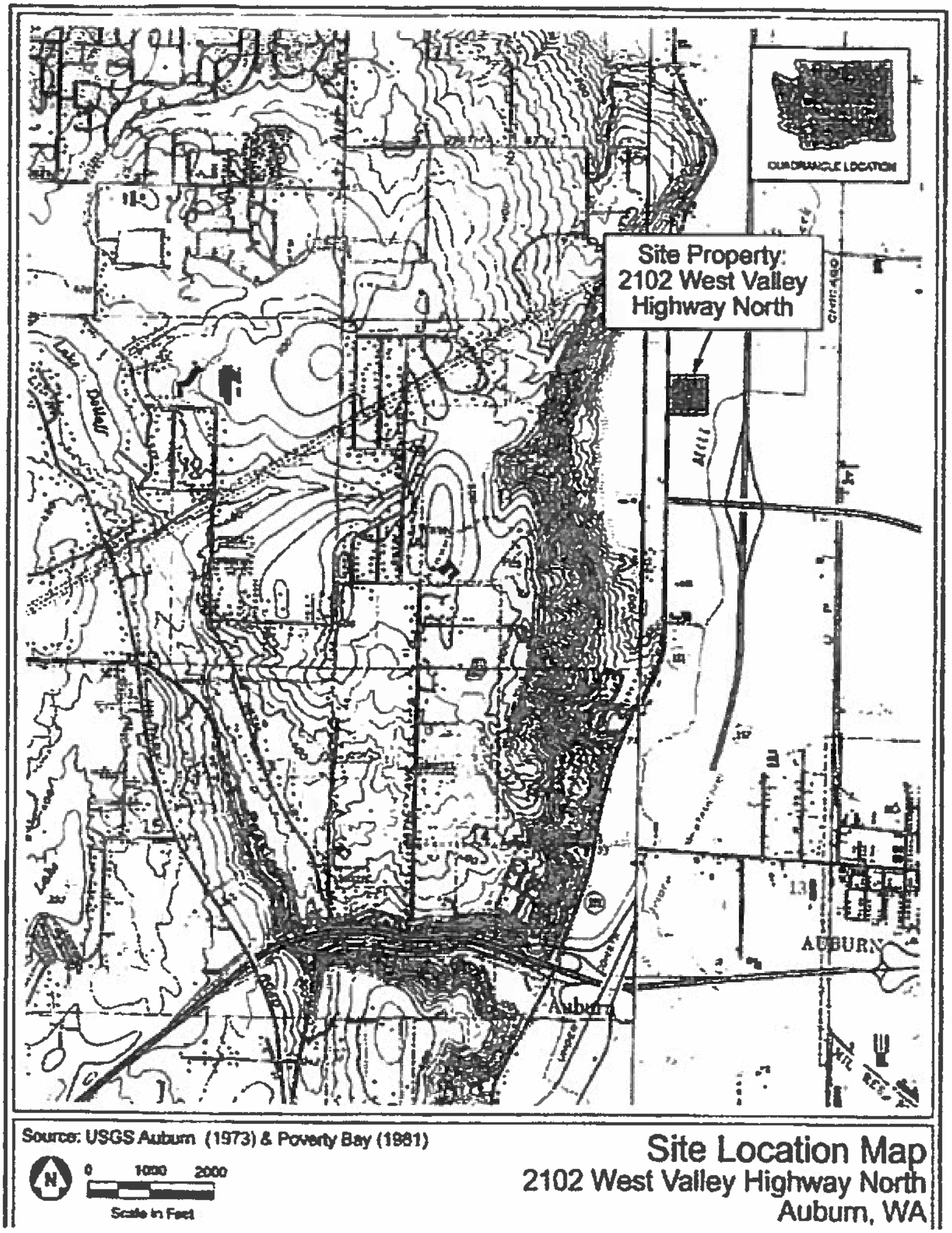
5. 1999 Restrictive Covenant;

6. Ecology, 2010 Site Visit.

7. Ecology, 2016, Site Visit.

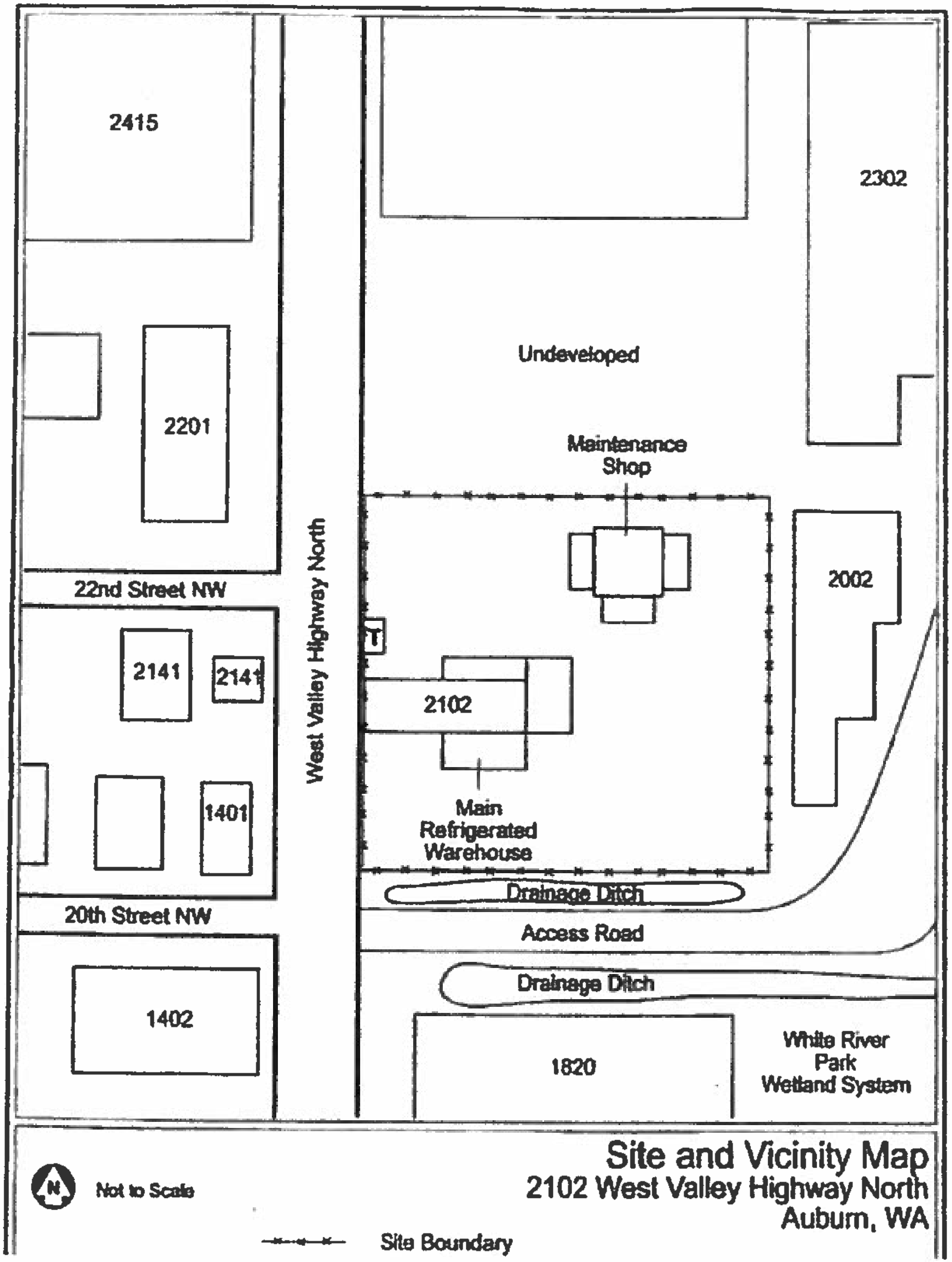
6.0 APPENDICES

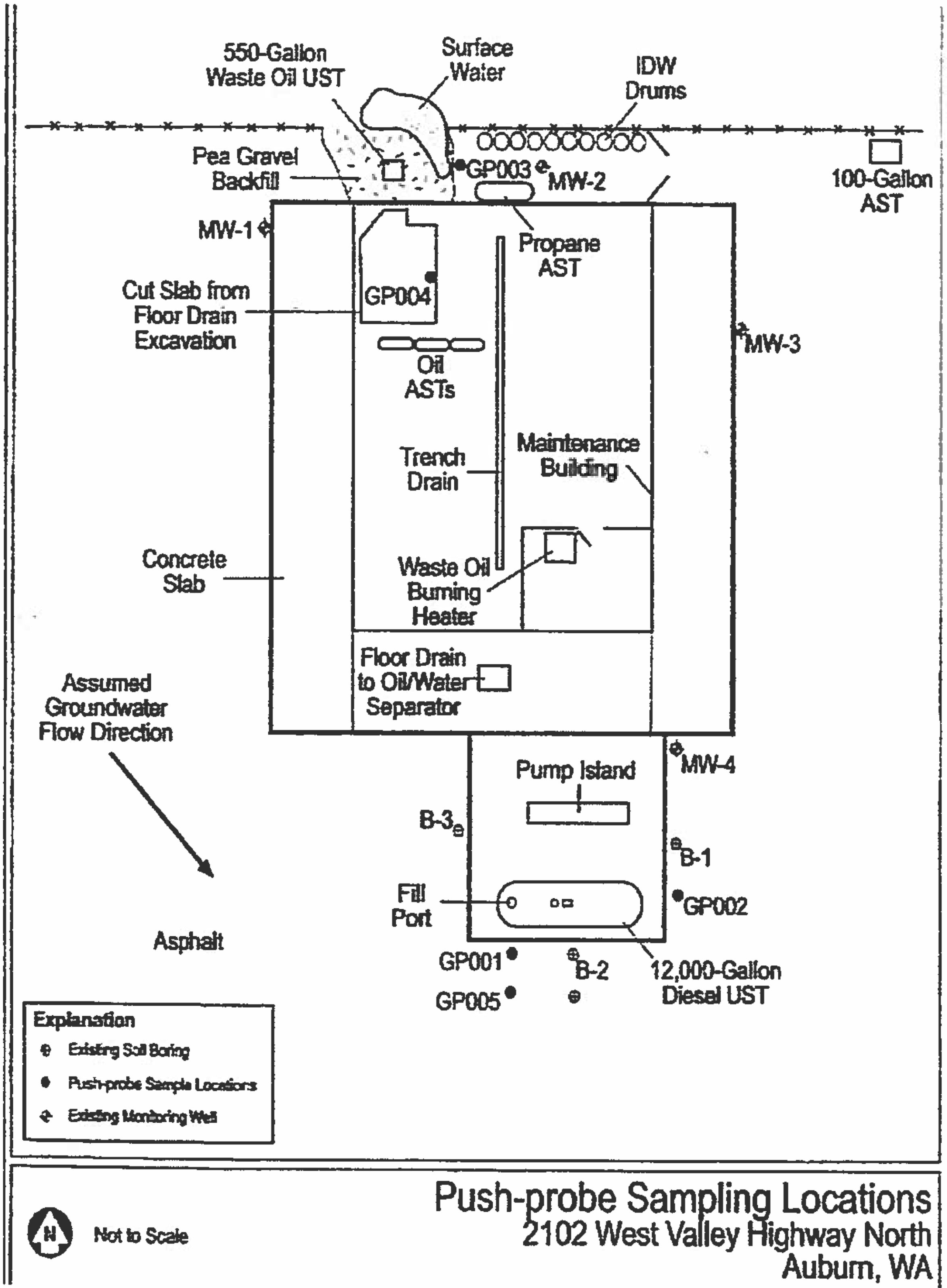
6.1 Vicinity Map



Site Location Map
2102 West Valley Highway North
Auburn, WA

6.2 Site Plan


2415
2302
Undeveloped
2201
Maintenance
Shop
22nd Street NW
West Valley Highway North
2002
2141
2141
2102
1401
Main
Refrigerated
Warehouse
Drainage Ditch
20th Street NW
Access Road
Drainage Ditch
1402
1820
White River
Park
Wetland System
Site and Vicinity Map
2102 West Valley Highway North
Auburn, WA
N
Not to Scale
Site Boundary


550-Gallon Waste Oil UST
Surface Water
IDW Drums
Pea Gravel Backfill
GP003
MW-2
100-Gallon AST
MW-1
Propane AST
Cut Slab from Floor Drain Excavation
GP004
MW-3
Oil ASTs
Trench Drain
Maintenance Building
Concrete Slab
Waste Oil Burning Heater
Floor Drain to Oil/Water Separator
Assumed Groundwater Flow Direction
MW-4
Pump Island
B-3
B-1
Fill Port
GP002
Asphalt
GP001
B-2
12,000-Gallon Diesel UST
GP005
Explanation
Existing Soil Boring
Push-probe Sample Locations
Existing Monitoring Well
N
Not to Scale
Push-probe Sampling Locations
2102 West Valley Highway North
Auburn, WA

6.3 TPH-Dx Concentration Map

(not available)

6.4 Environmental Covenant

WHEN RECORDED RETURN TO:

Jeffrey L. Péwé
58th Floor, Columbia Center
701 Fifth Avenue
Seattle, WA 98104

19990826000894
PAGE 001 OF 006
08/26/1999 10:42
KING COUNTY, WA

MONTGOMERY PUR COV 13.00

Reference Number(s) of related document(s): None.

Grantor: David G. Pollart, a married person as his separate estate.

Full legal on ***Attachment A***.

Grantee: None.

Legal Description (abbreviated): A portion of the Northwest Quarter of the Northwest Quarter of Sec. 12-T21N-R4E, King County, Washington.

Assessor's Tax Parcel ID Number: Parcel A: 122104-9034-08

RESTRICTIVE COVENANT

Property Owner:	**David G. Pollart**
Property Address:	**2102 West Valley Highway, Auburn, King County, Washington**

THIS DECLARATION OF RESTRICTIVE COVENANT is made pursuant to RCW 70.105D.030(1)(f) and (g), and WAC 173-340-440 by David G. Pollart, and his successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

(1) Phase I Environmental Assessment, Provisioners Terminal, Auburn, Washington, prepared for Watkins Terminals, Inc., by Atlantic Geosciences, Inc., dated September 14, 1998.

(2) Remedial Investigation/Feasibility Study, prepared for Provisioners Express Auburn Facility by Environmental Management Resources, Inc., dated March, 1999.

(3) Results of Interim TPH Analysis, Groundwater Monitoring and Stream Sampling, Provisioners Express Facility, Auburn, WA.,, prepared for Provisioners Express Auburn Facility by Environmental Management Resources, Inc., dated April 20, 1999.

These documents are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of oil and diesel range total petroleum hydrocarbons ("TPH") which exceed the Model Toxics Control Act Method A Residential Cleanup Levels for subsurface soil established under WAC 173-340-740.

The undersigned, David G. Pollart, is the owner of the real property (hereafter "Property") in the County of King, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described in ***Attachment A*** of this Restrictive Covenant and made a part hereof by reference.

David G. Pollart makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1.

1. The Property shall be used only for traditional industrial uses, as described in RCW 70.105D.020(23) and defined in and allowed under the City of Auburn zoning regulations as of the date of this Restrictive Covenant.

2. No groundwater may be taken for any use from the Property.

3. Any activity on the Property that may interfere with the ongoing monitoring of groundwater wells is prohibited.

4. A portion of the Property contains TPH contaminated soil located under the floor, north wall and foundation of the maintenance building located on the northeast portion of the Property, as described in the reports listed above. The Owner shall not alter, modify, or remove the existing structure of the maintenance building in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

DATED this 25th day of August, 1999.

David G. Pollart
David G. Pollart

RESTRICTIVE COVENANT
rdc \my documents\revised pollart restrictive covenant doc

Page 4

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that David G. Pollart is the person who appeared before me, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes stated therein.

Dated August 25, 1999.

JEFFREY L PEWE
COMMISSION EXPIRES
NOTARY
PUBLIC
SEPT 1, 2002
STATE OF WASHINGTON

Printed Name: Jeffrey L. Pewe
NOTARY PUBLIC, State of Washington
My appointment expires 9/1/02

Attachment A

Parcel A:

THE EAST 500 FEET OF THE WEST 536 FEET OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 4 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
EXCEPT THE SOUTH 60 FEET THEREOF; AND
EXCEPT THE NORTH 742.12 FEET THEREOF;

(ALSO KNOWN AS LOT 3 OF CITY OF AUBURN LOT LINE ADJUSTMENT NO. LLA-11-87, RECORDED UNDER RECORDING NUMBER 8706221496, BEING LOT 3 AND A PORTION OF LOT 2 OF CITY OF AUBURN SHORT PLAT NUMBER SP-3-86, RECORDED UNDER RECORDING NUMBER 8606050397.)

6.5 Photo log

Photo 1: UST under concrete pad at right, south side of maintenance bldg.

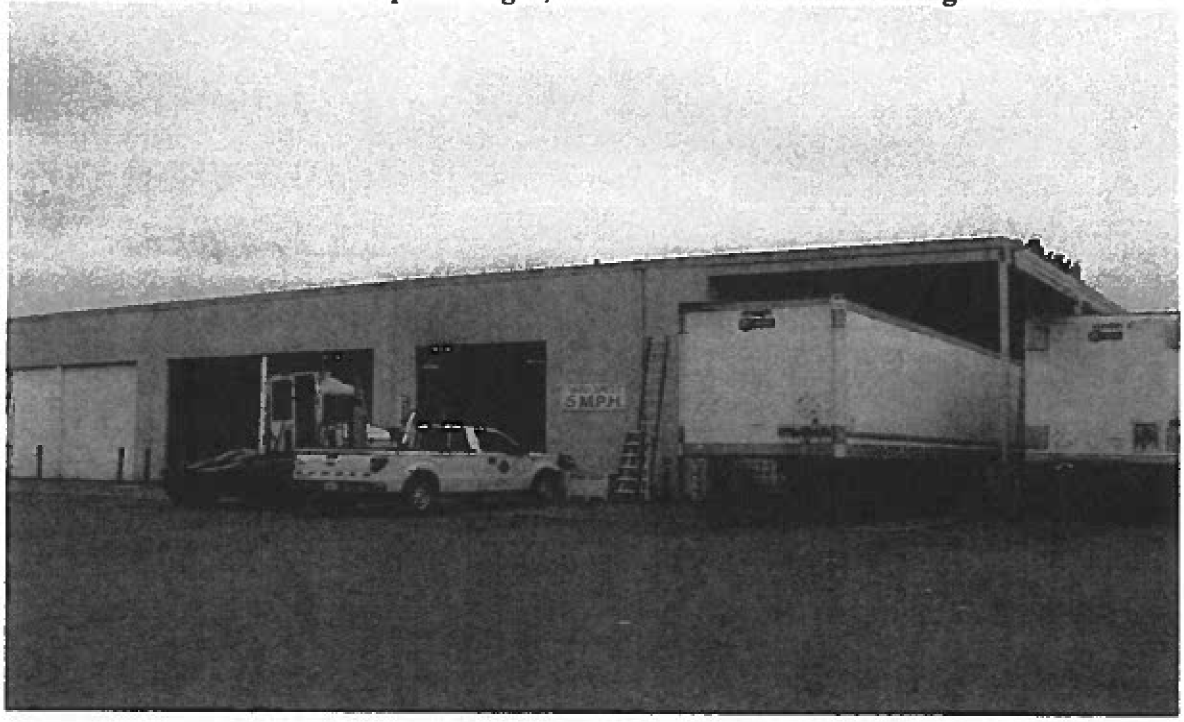


Photo 2: Asphalt area southeast of the maintenance building at the right.

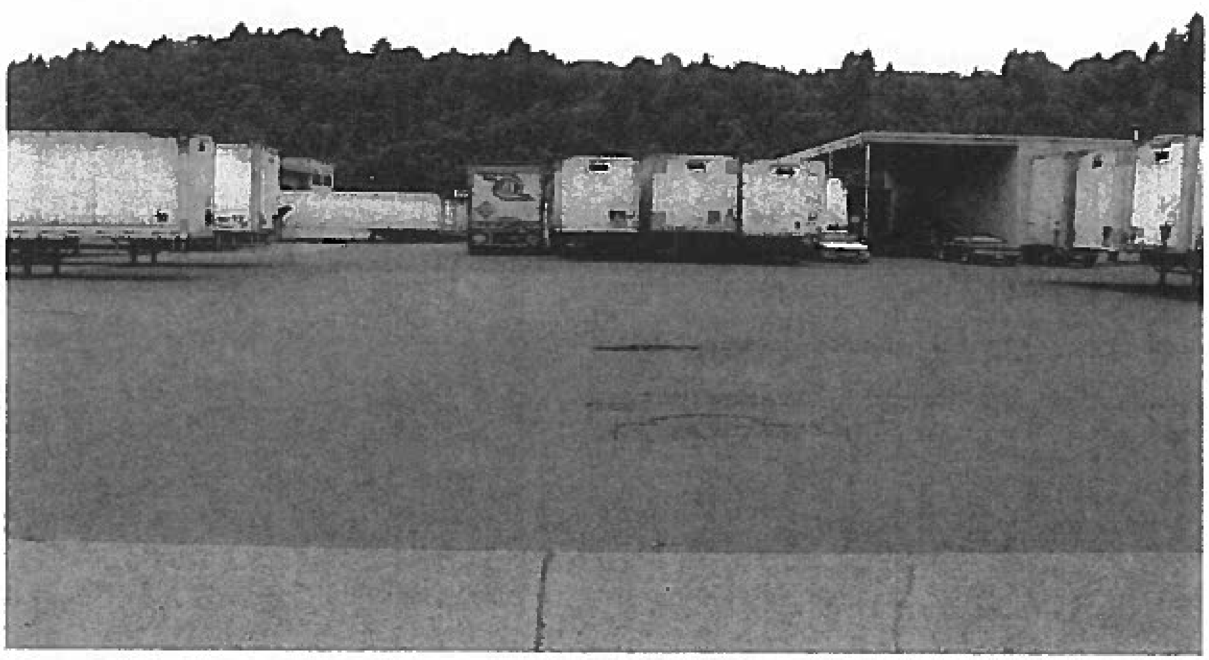


Photo 3: Monitoring wells are still in use at the property

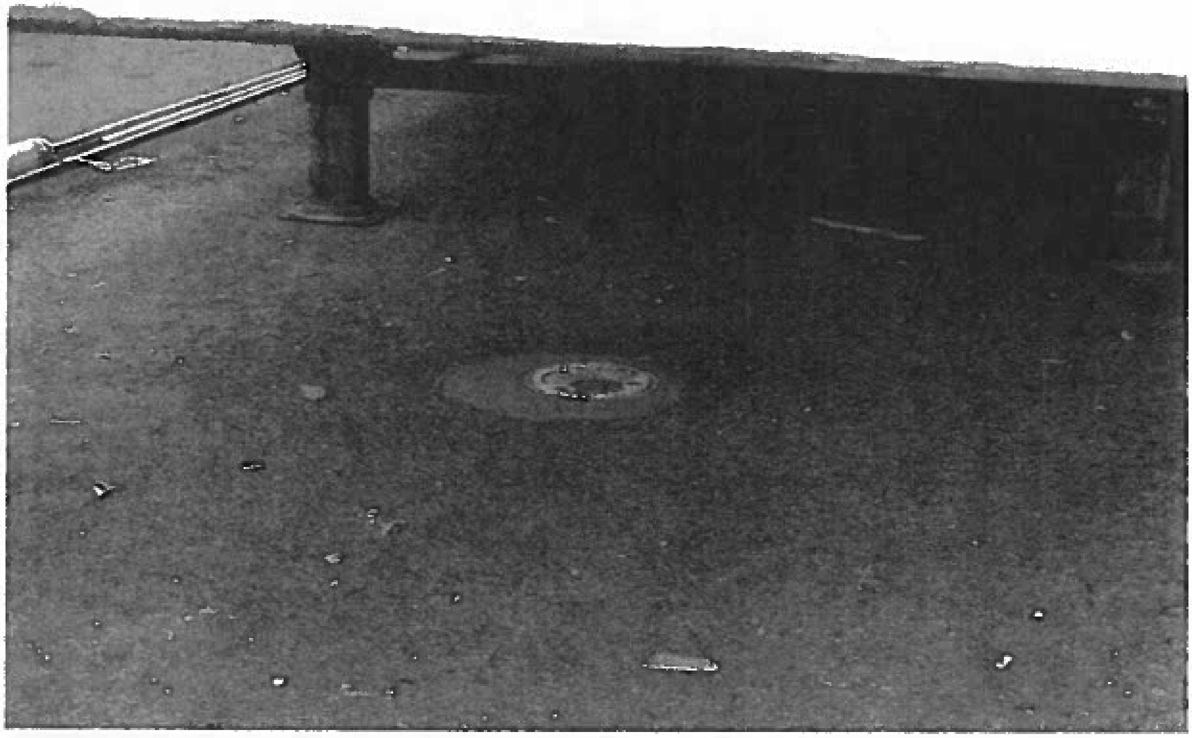
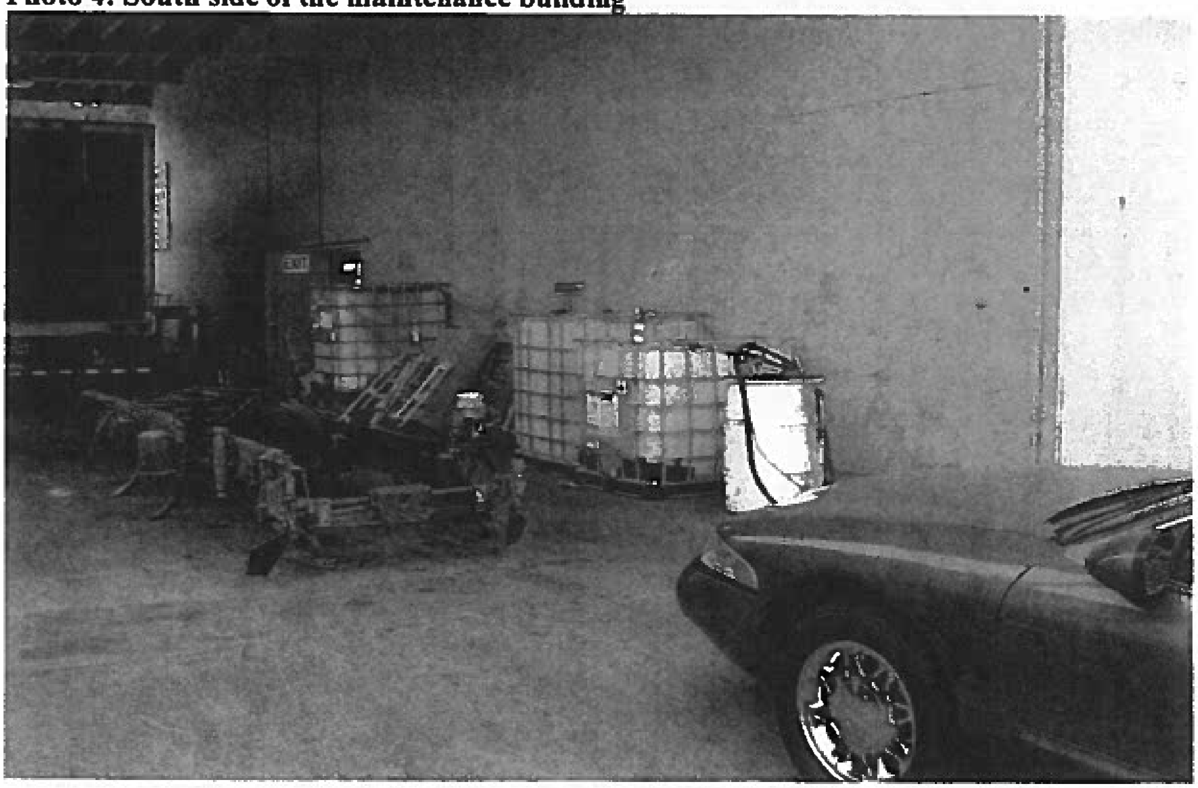


Photo 4: South side of the maintenance building



ENVIRONMENTAL PARTNERS INC 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 ph 425.395.0010

December 9, 2013

Mr. David Pollart

P.O. Box 1096

Mercer Island, Washington, 98040-1096

Re: Phase II Environmental Site Assessment
Estes West Trucking Facility
2012 West Valley Highway North
Auburn, Washington
VCP# NW2532

EPI Project Number: 61901.3

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to submit the following letter report summarizing site investigation tasks that were performed as part of a Phase II Environmental Site Assessment (ESA) of the Estes West trucking facility located at 2102 West Valley Highway North in Auburn, Washington (the "Site"). The site location is shown in Figure 1. The Phase II ESA that is summarized in this letter report is a component of the Remedial Investigation (RI) requested by Mr. Eugene Freeman, Ecology Site Manager for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional No Further Action (NFA) determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on three years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or heavier-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from the VCP due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP number NW2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained at concentrations greater than MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CULs.

A 12,000-gallon diesel fuel UST was removed from the south side of the maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the UST decommissioning activities and soil and groundwater sampling results.

Ecology issued an Opinion Letter dated April 22, 2013, which indicated that additional information was required regarding the lateral and vertical extent of a migrating groundwater plume at the Site. In telephone and email discussions, the Ecology Site Manager requested an additional monitoring well near the southwest corner of the maintenance building and a monitoring well at the southeast corner of the former location of the 12,000-gallon diesel fuel UST that was removed in November 2012. EPI completed installation and sampling of these new wells, designated MW-5 and MW-6 respectively, on June 5th, 2013. The locations of new wells MW-5 and MW-6 are shown on Figure 2.

Groundwater samples collected from MW-5 and MW-6 were submitted for GRPH using Ecology Method NWTPH-Gx, BTEX using EPA Method 8021B, and DRPH and HRPH using Ecology Method NWTPH-Dx. Samples from both wells MW-5 and MW-6 were non-detect for GRPH, HRPH, and BTEX compounds; however, the samples from MW-5 and MW-6 had DRPH concentrations of 160 µg/L and 680 µg/L, respectively. The DRPH concentration in the sample from MW-6 exceeded the MTCA Method A CUL of 500 µg/L. Wells MW-5 and MW-6 were sampled again in August 2013 as part of the quarterly groundwater monitoring program. DRPH was again detected in samples from MW-5 and MW-6 at concentrations of 56 µg/L and 790 µg/L, respectively.

In a follow-up email communication with EPI on July 22, 2013, The Ecology Site Manager, Mr. Eugene Freeman, indicated that additional soil and groundwater sampling would be necessary to delineate the lateral and vertical extent of the soil and groundwater impacts in the vicinity of MW-1 and at the former 12,000 gallon diesel UST. Mr. Freeman's opinion is based upon concentrations of DRPH and HRPH greater than the MTCA CUL of 500 μg/L in samples from MW-1 observed since November 2011 and the DRPH concentration in the sample from MW-6, which also exceeded the MTCA CUL. Mr. Freeman indicated that it would be also necessary to demonstrate that there was no impact to Mill Creek located to the west of the Estes West facility.

PHASE II ESA TASKS

The following scope of services performed was intended to address Ecology's request for additional information regarding the extent of soil and groundwater impacts at the Site and to provide the site-specific data that are necessary to select an appropriate remediation strategy for the Site if remediation is warranted. However, the actual design of the remediation strategy was not part of this scope of services for the Phase II ESA.

The scope of services for the tasks performed as part of the Phase II ESA was divided into four main tasks:

Task 1: Coordinate with Ecology for approval of the planned probe locations and concurrence with the scope of services for the Phase II ESA.

Task 2: Mark proposed probe locations and perform a private utility locate at each of the locations.

Task 3: Survey monitoring well measuring point elevations. Measuring point elevations for newer wells MW-5 and MW-6 were not surveyed after their installation. (Task 3 was performed concurrently with Task 2).

Task 4: Perform soil and groundwater sampling and analysis.

The methods used and the resulting data generated for each task are summarized in the following sections.

Task 1: Coordinate with Ecology

EPI prepared and submitted a figure showing the proposed locations of the nine probes and written descriptions of the planned soil and groundwater sampling for the Phase II ESA to Ecology Project Manager Eugene Freeman for his review and input.

In an email sent to EPI on October 8, 2013 Mr. Freeman indicated that the proposed probe locations, sampling intervals, and laboratory analyses were acceptable to Ecology. Mr. Freeman also noted that "If petroleum contamination is found in the borings, we will need to assess if there is migration of a plume and we might need to establish additional borings to determine the extent of contamination".

Task 2: Mark Probe Locations and Perform Utility Locate

EPI staff met with a qualified underground utility locating service at the site to mark and clear the nine proposed direct push sampling locations and adjust probe locations as needed to avoid underground and overhead utilities. EPI staff also marked the area to be cleared by public utility locating services as required by law. All proposed probe locations and limitations for the public locate were clearly marked using white spray paint specifically formulated for temporarily marking pavement.

None of the proposed probe locations had to be adjusted to avoid detected underground utilities or overhead obstructions. Slight adjustments to probe location DP-2 were necessary to avoid a roll-off bin containing metal scrap being temporarily accumulated on site. Probe locations are depicted in Figure 2.

Task 3: Well Surveying

EPI staff performed a closed loop elevation survey of measuring point elevations for the six on-site monitoring wells. Wells MW-1 through MW-4 were surveyed to an assigned onsite benchmark by the previous consultant; however, newer wells MW-5 and MW-6 were not surveyed. The surveyed elevations were referenced to the top of the northernmost bollard at the northwest corner of the Maintenance Building just east of well MW-1. The benchmark was assigned an assumed elevation of 100 feet.

Measuring point elevations for the monitoring wells are the north edge of the PVC well casing unless specifically marked elsewhere on the PVC casing. Based on the EPI survey the measuring point elevations for the six monitoring wells at Estes West are presented in Table 1.

EPI prepared a groundwater elevation contour and flow direction figure based on the August 2013 quarterly monitoring event depth to water measurements and the surveyed measuring point elevations in Table 1. The revised groundwater elevation contour and flow direction figure, presented as Figure 3, differs from the one presented in the 9th round quarterly report in that it includes groundwater elevation data from MW-5 and MW-6.

Figure 3 indicates that the groundwater flow direction at the time of the August 2013 sampling event was from west to east. Historical groundwater flow direction data indicated that groundwater flow was toward the southeast; however, those few groundwater flow maps that were produced were based on water level data from only four wells rather than the current six wells at the Site. In addition, the groundwater gradient at the Site is very flat and there are only small differences in groundwater elevations among the six monitoring wells, which causes the generally accepted 0.02-ft precision for manual groundwater level measurements a potentially significant factor in the final groundwater elevation contours.

We can not currently determine if the noted change in groundwater flow direction, from southeast in historical data to east in recent data, is the result of seasonal effects, the addition of two more wells, re-surveyed measuring point elevations, or measurement precision effects.

Task 4: Soil and Groundwater Sampling and Analysis

Sampling Locations

Recent communication from the Ecology Site Manager, Eugene Freeman noted that further delineation and characterization of the groundwater plume(s) was necessary to move the site toward an NFA determination. EPI advanced nine borings at the Site at the locations shown in Figure 2. The borings were completed using a full size direct push probe rig and extended to approximately 10 ft. below ground surface (bgs). The nine sampling locations were intended to address Ecology's requirement to delineate the extent of groundwater impacts, especially downgradient of MW-1 and between the former location of the decommissioned 12,000-gallon diesel UST and Mill Creek, which is located to the east.

Field Procedures

Five of the nine probe locations, designated DP-1 through DP-5 were completed near the northwest corner of the maintenance building in the vicinity of MW-1 and the former 550-gallon waste oil UST as shown in Figure 2. The two probe locations upgradient of MW-1 (DP-1 and DP-2) were intended to identify potential soil source areas that might require excavation or other remediation technologies. The three probe locations downgradient of MW-1 (DP3, DP-4, and DP-5) were intended to evaluate the extent and pattern of DRPH concentrations downgradient of MW-1 for remediation system design purposes.

Probe locations DP-1 through DP-5 were sampled for both soil and groundwater. Soil samples were collected from the 0-4 and 4-8 ft bgs intervals at each probe location and were field screened using a photoionization detector (PID) and visual and olfactory indicators. The sample interval that was evaluated to be more impacted based on field screening results was submitted for laboratory analysis of DRPH and HRPH using Ecology Method NWTPH-Dx.

The remaining four probe locations, designated DP-6 through DP-9 are downgradient of the former 12,000-gallon diesel UST and are intended to delineate the extent of the DRPH impacts to groundwater. Soil impacts are not anticipated in the area downgradient of the former 12,000-gallon UST based on sidewall sampling conducted during UST removal. Therefore, soil cores from the 0-4 and 4-8 ft bgs intervals were field screened using a PID and visual and olfactory indicators. Soil samples were not submitted for laboratory analysis for locations DP-6 through DP-9 because impacts were not noted through the field screening process. Probe locations DP-6 through DP-9 were sampled for groundwater and the groundwater samples were submitted for DRPH and HRPH analysis using Ecology Method NWTPH-Dx.

Soil samples were collected from acetate lined sampling cores using a single use, decontaminated, stainless steel sampling scoop. Representative samples were placed into appropriate laboratory-supplied sample jars and were placed into a cooler containing sufficient bagged ice to maintain an internal temperature of $4^{o}C$ or lower.

Groundwater samples were collected using a peristaltic pump equipped with new, single use, disposable polyethylene tubing. Probes were purged using low-flow purging techniques and field parameters were measured and recorded to demonstrate stabilization. When stabilization was achieved groundwater samples were collected into appropriate laboratory-supplied sample bottles and were placed into a cooler containing sufficient bagged ice to maintain an internal temperature of 4^{o}C or lower.

Soil and groundwater samples were delivered to Friedman & Bruya laboratories for analysis following standard chain of custody procedures.

Soil Sampling Results

One soil sample was collected from each of the five probe locations located around well MW-1. The soil sample depth at each location was selected by evaluations of the field screening results indicating the greatest potential for impacts. Soil sample depths were consistently in the 7 to 8 feet bgs interval, which corresponded to the capillary fringe above the water table at the facility. Soil sample results are summarized in Table 2. Laboratory data sheets for the Phase II ESA soil samples are presented in Attachment A.

Analytical results summarized in Table 2 indicate that soil has no measurable DRPH or HRPH impacts at four of the five probe locations surrounding MW-1. Only the soil sample from probe DP-3 had measurable concentrations of DRPH and HRPH, which were both at concentrations an order of magnitude less than their cleanup levels.

Groundwater Sampling Results

One groundwater sample was collected from each of the five probe locations located around well MW-1 and from the four probe locations downgradient and cross-gradient of MW-6 and the former 12,000-gallon diesel UST. The groundwater sample depths were from the upper 3 feet of the aquifer and temporary well screens were installed so that they straddled the water table to detect any potential free product floating on the water table. Groundwater sample results are summarized in Table 3. Table 3 also includes groundwater sample results for the most recent (August 2013) quarterly groundwater sampling event for context. Laboratory data sheets for the Phase II ESA groundwater samples are presented in Attachment A.

Analytical results for the groundwater samples from probe locations DP-1 through DP-5 were intended to further delineate consistent MTCA Method A Cleanup Levels exceedences for DRPH and to a lesser extent HRPH in samples from MW-1. Probe locations DP-6 through DP-9 were intended to further delineate DRPH impacts to groundwater from the former 12,000-gallon diesel UST that were noted in samples from MW-6. Evaluations of the groundwater data from this Phase II ESA are summarized in the following bullets:

- DP-1 results indicate that impacts noted in samples from well MW-1 are not likely caused by groundwater coming across the property boundary from the north. DRPH was detected at a concentration of 180 μg/L, which is less than the cleanup level of 500 μg/L. HRPH was not detected in the groundwater sample from DP-1.

- DP-2 results indicate that DRPH and HRPH impacted groundwater extends westward from MW-1 to at least the DP-2 location, which is approximately 15 feet west of MW-1. DRPH and HRPH concentrations are within the historical ranges for samples from MW-1 potentially indicating a common source. The DRPH and HRPH concentrations of 760 and 1,100 μg/L, respectively, are both greater than their MTCA Cleanup Level of 500 μg/L.

- DP-3 results indicate that both DRPH and HRPH concentrations are significantly greater than their MTCA Cleanup Level of 500 μg/L. A review of historical maps showing the lateral extent of two remedial excavations performed to remove impacted soil associated with the former 550-gallon waste oil UST left a small volume of impacted soil under the maintenance building foundation because that soil was inaccessible without significant risk of damage to the building foundation. The elevated DRPH and HRPH concentrations in the sample from DP-3 likely represent groundwater in a limited area that is affected by the small volume of unexcavated soil under the building foundation.

- DP-4 results indicate that DRPH and HRPH impacts extend from MW-1 southward at least as far as the DP-4 location, which is approximately 25 feet south of MW-1. DRPH and HRPH concentrations are within the historical ranges for samples from MW-1 potentially indicating a common source. The DRPH and HRPH concentrations of 1,100 and 2,400 μg/L, respectively, are both greater than their MTCA Cleanup Level of 500 μg/L.

- DP-5 results indicate that DRPH and HRPH impacts to groundwater do not extend from MW-1 southeast to the DP-5 location based on non-detections for both compounds in the DP-5 sample.

- DP-6 results indicate that DRPH and HRPH impacts do not extend to the DP-6 location, which is approximately 25 feet east (downgradient) of the former 12,000-gallon diesel UST. DRPH was detected at a concentration of 150 μg/L, which is less than the cleanup level of 500 μg/L. HRPH was not detected in the groundwater sample from DP-6.

- DP-7 results indicate that DRPH and HRPH impacts do not extend to DP-7, which is approximately 20 feet south (cross-gradient) of the former 12,000-gallon diesel UST. DRPH and HRPH were not detected in the groundwater sample from DP-7.

- DP-8 results are mixed. DRPH was detected at a concentration of 410 μg/L, which is less than the MTCA Method A Groundwater Cleanup Level of 500 μg/L. This indicates that DRPH impacts to groundwater from the former 12,000-gallon diesel UST extend eastward (downgradient) to a point somewhere between MW-6 and DP-8, which is 50 feet east (downgradient) of MW-6. However, HRPH was detected at a concentration of 730 μg/L, which is greater than the MTCA Method A Groundwater Cleanup Level of 500 μg/L. This impacted groundwater is likely not related to the former 12,000-gallon diesel UST, which contained diesel fuel only. In addition, HRPH was not detected in samples from well MW-6, which is the closest downgradient sampling location to the UST and would have HRPH detections if they were associated with the UST.

- DP-9 results indicate that DRPH and HRPH impacts do not extend to DP-9, which is between DP-7 and DP-8 and is approximately 30 feet southeast (cross-gradient) of the former 12,000-gallon diesel UST. DRPH and HRPH were not detected in the groundwater sample from DP-9.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater Elevations and Flow Directions

Historical groundwater elevation data predating the installation of MW-5 and MW-6 indicate a southerly component to the groundwater flow direction, which is why probes DP-7 and DP-9 were located south of the former 12,000-gallon diesel UST. Based on the current more comprehensive data set, with the additional groundwater elevation data from MW-5 and MW-6, our understanding of the prevailing groundwater flow direction has been revised to be west to east, potentially with a northerly component, as shown in Figure 3.

The groundwater gradient at the site is very flat, which greatly increases the significance of any field measurement variability, which is generally considered to be ±0.02 ft. However, all groundwater elevation contours for the site indicate a consistent west to east groundwater flow direction. In addition, the non-detections for DRPH and HRPH in samples from DP-7 and DP-9, which are south and southeast, respectively, of the former 12,000-gallon diesel UST, indicate that there is not likely a southerly component to groundwater flow.

Soil Sample Results

Four of the five soil samples, collected at DP-1 through DP-5, were non-detect for DRPH and HRPH. The sample from DP-3 had detections of DRPH and HRPH at concentrations of 180 mg/kg and 280 mg/kg, respectively, which are both significantly lower than their MTCA Method A Cleanup Levels for Unrestricted Land Uses of 2,000 mg/kg. These results indicate that there is not likely a large source of DRPH and HRPH in the vadose zone soil surrounding well MW-1. The DRPH and HRPH detections in the soil sample from DP-3 are likely representative of the edge of the soil impacts remaining from impacted soil under the Maintenance Building foundation.

Groundwater Sample Results

Groundwater sample results, including data from the August 2013 quarterly sampling data, indicate that groundwater impacts are limited to two general areas: MW-1 and the surrounding area; and downgradient of the former 12,000-gallon diesel UST.

Probes DP-1 through DP-5 surround impacted well MW-1 in all four cardinal directions and to the southeast, which was thought to be the general groundwater flow direction based on historical data. Analytical results from DP-1 indicate that groundwater impacts are not likely coming from the adjoining property to the north. The groundwater hot spot is at DP-3, which is at a location where previous remedial soil excavations left some impacted soil in place to maintain building foundation stability. Non-detections in the groundwater sample from DP-5 provide further indication that the general groundwater flow direction is not to the southeast as was thought based on historical data.

Probes DP-6 though DP-9 were placed at locations potentially downgradient of the former 12,000-gallon diesel UST based on historical (pre-Phase II ESA) data. The groundwater data from these probes indicate that groundwater flow is not to the southeast but is more likely toward the east-northeast as indicated by groundwater elevation contours shown in Figure 3.

DRPH detections in samples from DP-6 and DP-8 are likely attributable to the former UST. The detections of DRPH at concentrations less than their MTCA Method A Cleanup Levels indicate that diesel impacts at concentrations greater than MTCA from the former UST extend to somewhere between well MW-6 and probes DP-6 and DP-8.

The HRPH concentration of 730 μg/L in the sample from DP-8 is not likely attributable to the former 12,000-gallon diesel UST. The two sampling locations downgradient of the former UST, MW-6 and DP-6, both have detections of DRPH but are non-detect for HRPH.

Recommendations

Soil and groundwater impacts in the area surrounding MW-1 have been adequately characterized to design, install, test, and operate an active groundwater remediation system. Field parameter data, specifically dissolved oxygen (DO) and oxidation reduction potential (ORP), indicate that geochemical conditions in the aquifer are strongly reducing (anaerobic). Petroleum hydrocarbons are readily biodegraded by aerobic bacteria, which require aerobic geochemical conditions to be effective in that role.

We will prepare and submit a work plan describing the remediation technology that has been selected for the site, including the general design of the remediation system and proposed monitoring procedures, analytes, and reporting schedules.

Sincerely,

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

State of Washington
Hydrogeologist
260
Licensed Geologist
DOUGLAS C. KUNKEL

ENCLOSURES

Tables

Table 1	Estes West Monitoring Well Measuring Point Elevations
Table 2	Phase II ESA Soil Sampling Analytical Results in mg/kg
Table 3	Phase II ESA Groundwater Sampling Analytical Results in μg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Phase II ESA Probe Locations
Figure 3	Site Representation, Groundwater Elevations and Flow Directions

Attachment

Attachment A	Laboratory Data Sheets

Tables

Table 1
Estes West Monitoring Well Measuring Point Elevations

Well ID	Previous Measuring Point Elevation[a]	Revised Measuring Point Elevation[b]
MW-1	100.51	95.46
MW-2	100.56	95.52
MW-3	100.50	95.47
MW-4	100.61	95.61
MW-5	Not Surveyed	95.58
MW-6	Not Surveyed	95.44

[a]Surveyed by EMR to an assumed elevation benchmark of 100 ft., location unknown.

[b]EPI survey performed 10/15/13. Surveyed to an assumed 100 ft. benchmark is top of bollard at NW corner of maintenance building.

Table 2
Phase II ESA Soil Sampling Analytical Results in mg/kg

Location ID	Sample ID	Sample Depth (ft. bgs)	DRPH[(a)]	HRPH[(a)]
DP-1	EW-DP-1:8	8	<25	<50
DP-2	EW-DP-2:7	7	<29	<57
DP-3	EW-DP-3:7	7	**180**	**280**
DP-4	EW-DP-4:7	7	<25	<50
DP-5	EW-DP-5:8	8	<27	<53
MTCA Method A Soil Cleanup Level (in mg/kg)			**2,000**	**2,000**

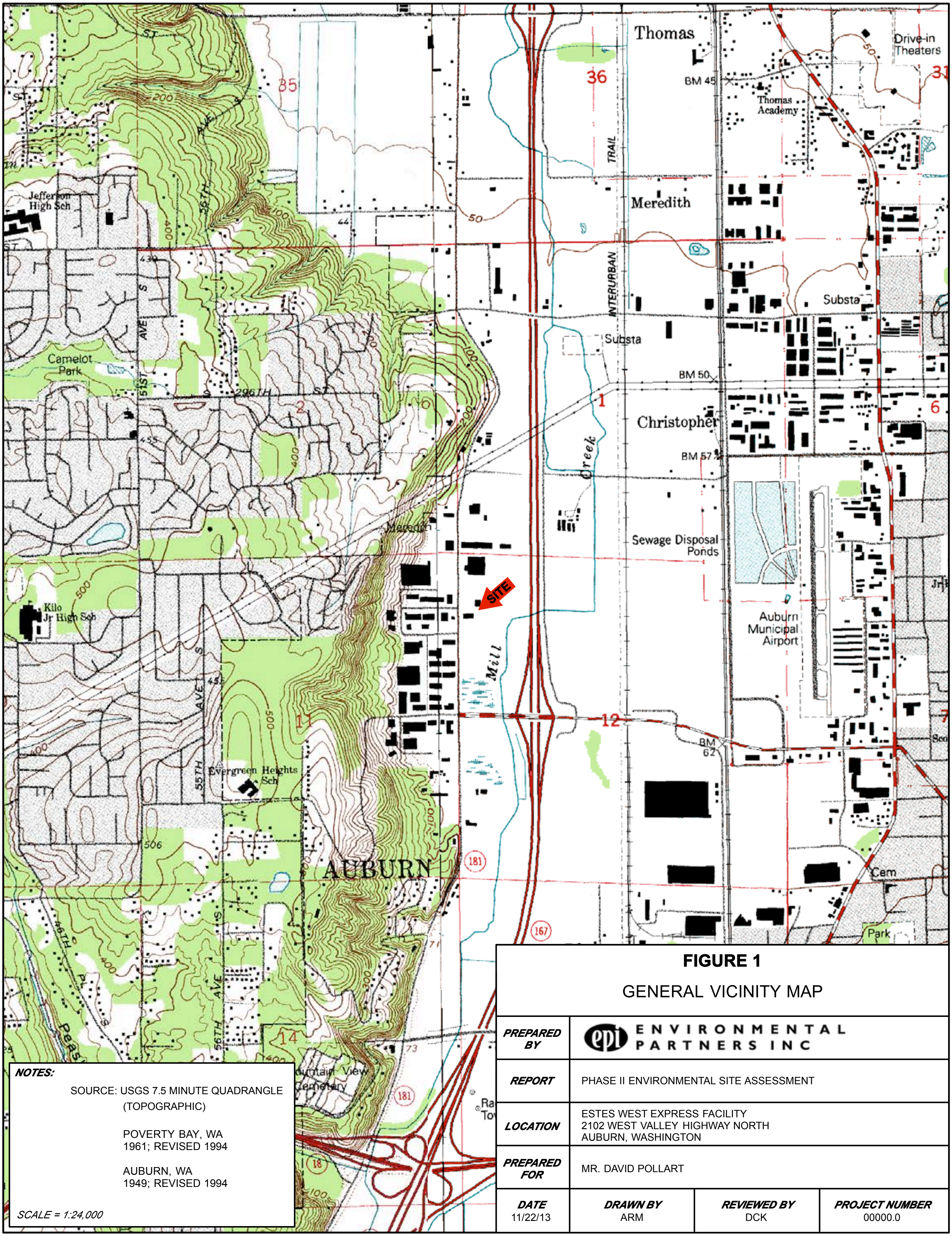
Notes:
(a) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
bgs = below ground surface
mg/kg = milligrams per kilogram
< = Not detected at the listed reporting limit
Bold = Detected, concentration less than MTCA Method A Soil Cleanup Level for Unrestricted Land Uses
Bold and Shaded = Detected, concentration greater than MTCA Method A Soil Cleanup Level for Unrestricted Land Uses

Table 3
Phase II ESA Groundwater Sampling Analytical Results in µg/L

Location ID	Sample ID	DRPH[(a)]	HRPH[(a)]
DP-1	EW-DP-1	**180**	<250
DP-2	EW-DP-2	**760**	**1,100**
DP-3	EW-DP-3	**66,000**	**97,000**
DP-4	EW-DP-4	**1,100**	**2,400**
DP-5	EW-DP-5	<130	<250
DP-6	EW-DP-6	**150**	<250
DP-7	EW-DP-7	<130	<250
DP-8	EW-DP-8	**410**	**730**
DP-9	EW-DP-9	<130	<250
MW-1	MW-1	**1,100**	**290**
MW-2	MW-2	**280**	<250
MW-3	MW-3	**140**	<250
MW-4	MW-4	**200**	<250
MW-5	MW-5	**56**	<250
MW-6	MW-6	**790**	<250
MTCA Method A Groundwater Cleanup Level (in µg/L)		**500**	**500**

Notes:
(a) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
µg/L = micrograms per liter
< = Not detected at the listed reporting limit
Bold = Detected, concentration less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Detected, concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 11/22/13	***DRAWN BY*** ARM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 00000.0

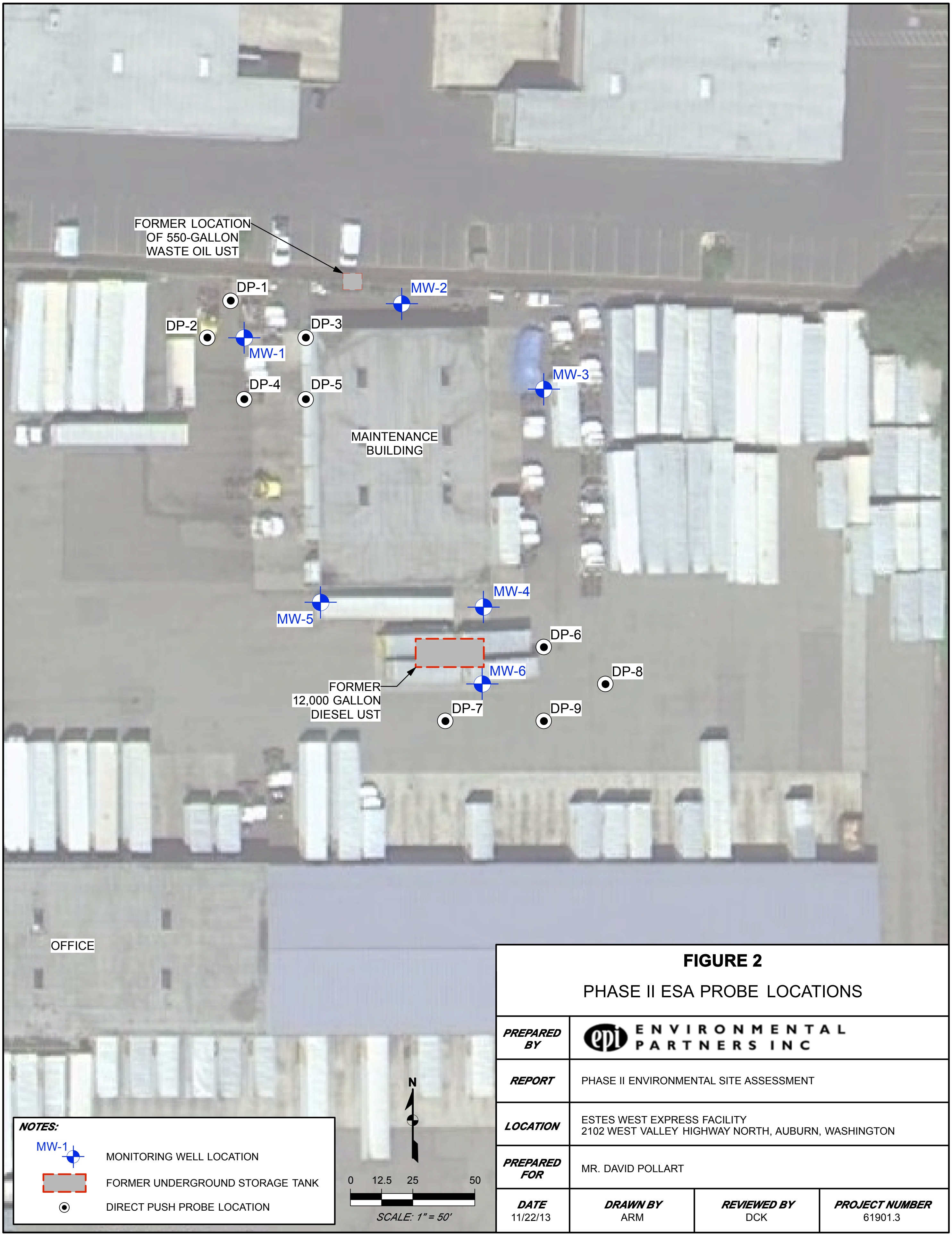


FIGURE 2

PHASE II ESA PROBE LOCATIONS

PREPARED BY	EPI ENVIRONMENTAL PARTNERS INC		
REPORT	PHASE II ENVIRONMENTAL SITE ASSESSMENT		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 11/22/13	**DRAWN BY** ARM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.3

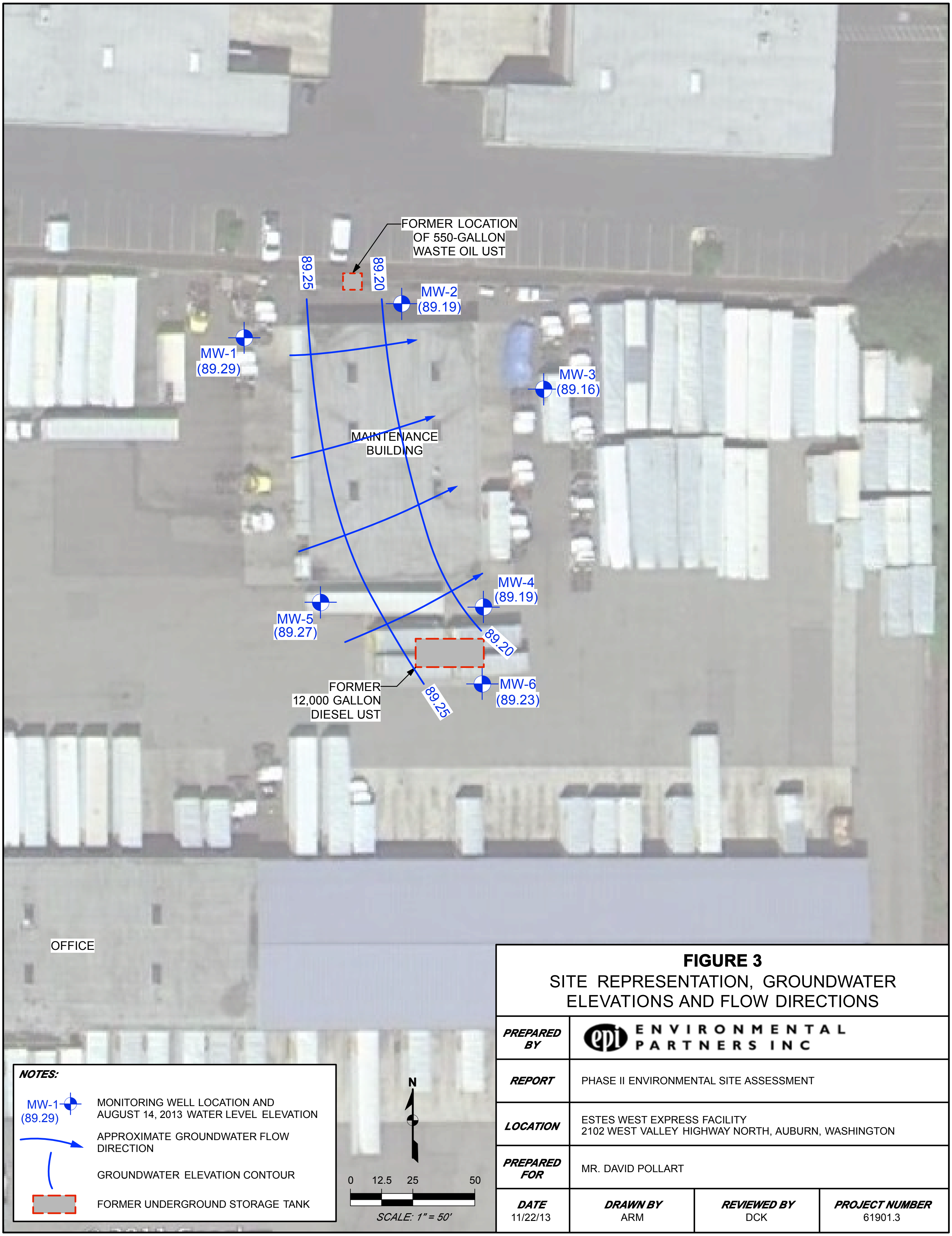


FIGURE 3

SITE REPRESENTATION, GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	PHASE II ENVIRONMENTAL SITE ASSESSMENT
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
11/22/13	ARM	DCK	61901.3

Attachment A
Laboratory Data Sheets

October 29, 2013

Mr. Doug Kunkel
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

Dear Mr. Kunkel,

On October 23rd, 14 samples were received by our laboratory and assigned our laboratory project number EV13100163. The project was identified as your 61901.3. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -01
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 10:52:00 AM
CLIENT SAMPLE ID	EW-DP-1:8	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	10/24/2013	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	10/24/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**98.5**	10/24/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/29/2013
		ALS JOB#:	EV13100163
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 10:20:00 AM
CLIENT SAMPLE ID	EW-DP-2:7	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	29	1	MG/KG	10/24/2013	EBS
TPH-Oil Range	NWTPH-DX	U	57	1	MG/KG	10/24/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**97.3**	10/24/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -03
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 8:44:00 AM
CLIENT SAMPLE ID	EW-DP-3:7	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**180**	25	1	MG/KG	10/24/2013	EBS
TPH-Oil Range	NWTPH-DX	**280**	50	1	MG/KG	10/24/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**96.4**	10/24/2013	EBS

Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.
Diesel range product reporting limits raised due to motor oil range product overlap.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/29/2013
		ALS JOB#:	EV13100163
		ALS SAMPLE#:	-04
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 9:51:00 AM
CLIENT SAMPLE ID	EW-DP-4:7	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	10/24/2013	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	10/24/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**98.0**	10/24/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -05
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 9:17:00 AM
CLIENT SAMPLE ID	EW-DP-5:8	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	27	1	MG/KG	10/24/2013	EBS
TPH-Oil Range	NWTPH-DX	U	53	1	MG/KG	10/24/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**102**	10/24/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -06
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 10:54:00 AM
CLIENT SAMPLE ID	EW-DP-1:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**180**	130	1	UG/L	10/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/28/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**117**	10/28/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains weathered diesel.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027		DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -07
CLIENT CONTACT:	Doug Kunkel		DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3		COLLECTION DATE:	10/22/2013 10:26:00 AM
CLIENT SAMPLE ID	EW-DP-2:GW		WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**760**	130	1	UG/L	10/26/2013	EBS
TPH-Oil Range	NWTPH-DX	**1100**	250	1	UG/L	10/26/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**104**	10/26/2013	EBS

Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -08
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 8:52:00 AM
CLIENT SAMPLE ID	EW-DP-3:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**66000**	2600	20	UG/L	10/26/2013	EBS
TPH-Oil Range	NWTPH-DX	**97000**	5000	20	UG/L	10/26/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25 20X Dilution	NWTPH-DX	**141 DS2**	10/26/2013	EBS

DS2 - Due to high dilution factor surrogate results should be considered uncontrolled.
Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -09
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 9:55:00 AM
CLIENT SAMPLE ID	EW-DP-4:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**1100**	130	1	UG/L	10/26/2013	EBS
TPH-Oil Range	NWTPH-DX	**2400**	250	1	UG/L	10/26/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**88.9**	10/26/2013	EBS

Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.
Diesel range product results biased high due to oil range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -10
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 9:23:00 AM
CLIENT SAMPLE ID	EW-DP-5:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	10/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/28/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**103**	10/28/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -11
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 12:07:00 PM
CLIENT SAMPLE ID	EW-DP-6:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**150**	130	1	UG/L	10/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/28/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**79.3**	10/28/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains weathered diesel.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -12
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 11:36:00 AM
CLIENT SAMPLE ID	EW-DP-7:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	10/28/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/28/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**88.7**	10/28/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE:	10/29/2013
		ALS JOB#:	EV13100163
		ALS SAMPLE#:	-13
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 1:02:00 PM
CLIENT SAMPLE ID	EW-DP-8:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**410**	130	1	UG/L	10/26/2013	EBS
TPH-Oil Range	NWTPH-DX	**730**	250	1	UG/L	10/26/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**89.7**	10/26/2013	EBS

Chromatogram indicates that it is likely that sample contains weathered diesel and lube oil.
Diesel range product results biased high due to oil range product overlap.

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ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS JOB#: ALS SAMPLE#:	10/29/2013 EV13100163 -14
CLIENT CONTACT:	Doug Kunkel	DATE RECEIVED:	10/23/2013
CLIENT PROJECT:	61901.3	COLLECTION DATE:	10/22/2013 12:37:00 PM
CLIENT SAMPLE ID	EW-DP-9:GW	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	10/26/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/26/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**83.1**	10/26/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS SDG#: WDOE ACCREDITATION:	10/29/2013 EV13100163 C601
CLIENT CONTACT:	Doug Kunkel		
CLIENT PROJECT:	61901.3		

LABORATORY BLANK RESULTS

MB-102313S - Batch 7301 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	10/23/2013	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	10/23/2013	EBS

MB-102513W - Batch 7306 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	10/25/2013	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/25/2013	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Environmental Partners, Inc. 295 NE Gilman Blvd., Suite 201 Issaquah, WA 98027	DATE: ALS SDG#: WDOE ACCREDITATION:	10/29/2013 EV13100163 C601
CLIENT CONTACT:	Doug Kunkel		
CLIENT PROJECT:	61901.3		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7301 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**103**			10/23/2013	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**101**	**2**		10/23/2013	EBS

ALS Test Batch ID: 7306 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**93.0**			10/25/2013	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**96.9**	**4**		10/25/2013	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only) EV13100163

Date 10-22-13 Page 1 Of 2

PROJECT ID: ~~61901.03~~ 61901.3
REPORT TO COMPANY: Environmental Partners Inc (EPI)
PROJECT MANAGER: Doug Kunkel
ADDRESS: 295 NE Gilman Blvd Ste 201
Issaquah WA 98027
PHONE: 425-988-4090 FAX:
P.O. #: 61901 E-MAIL: dougk@epi-wa.com
INVOICE TO COMPANY: EPI
ATTENTION: ~~Tom E~~ Monty Busbee
ADDRESS: Tom e@epi-wa.com

ANALYSIS REQUESTED: NWTPH-HCID; NWTPH-DX; NWTPH-GX; BTEX by EPA-8021; MTBE by EPA-8021 ☐ EPA-8260 ☐; Halogenated Volatiles by EPA 8260; Volatile Organic Compounds by EPA 8260; EDB / EDC by EPA 8260 SIM (water); EDB / EDC by EPA 8260 (soil); Semivolatile Organic Compounds by EPA 8270; Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐; PCB ☐ Pesticides ☐ by EPA 8081/8082; Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐; Metals Other (Specify); TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐

OTHER (Specify)

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-DX	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	EW-DP-1:8	10/22/13	1052	Soil	1	X	1	
2.	EW-DP-2:7	↓	1020	↓	2	X	1	
3.	EW-DP-3:7		0844		3	X	1	
4.	EW-DP-4:7		0951		4	X	1	
5.	EW-DP-5:8		0917		5	X	1	
6.	EW-DP-1:GW		1054	Water	6	X	1	
7.	EW-DP-2:GW		1026	↓	7	X	1	
8.	EW-DP-3:GW		0852		8	X	1	
9.	EW-DP-4:GW		0955		9	X	1	
10.	EW-DP-5:GW		0923		10	X	1	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: [signature] EPI 10/23/13
Received By: [signature] ALS 10/23/13 1150
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY
Fuels & Hydrocarbon Analysis: ~~5~~ (Standard) 3 1 SAME DAY
OTHER:
Specify: EDD

* Turnaround request less than standard may incur Rush Charges

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only) EV13100163

Date 10/22/13 Page 2 Of 2

PROJECT ID: 61901.3
REPORT TO COMPANY: EPI
PROJECT MANAGER: Doug Kunkel
ADDRESS: 295 NE Gilman Blvd Ste 201
Issaquah WA 98027
PHONE: FAX:
P.O. #: E-MAIL: dougk@epi-wa.com
INVOICE TO COMPANY: See pg 1
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED: NWTPH-HCID; NWTPH-DX; NWTPH-GX; BTEX by EPA-8021; MTBE by EPA-8021 ☐ EPA-8260 ☐; Halogenated Volatiles by EPA 8260; Volatile Organic Compounds by EPA 8260; EDB / EDC by EPA 8260 SIM (water); EDB / EDC by EPA 8260 (soil); Semivolatile Organic Compounds by EPA 8270; Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐; PCB ☐ Pesticides ☐ by EPA 8081/8082; Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐; Metals Other (Specify); TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐

OTHER (Specify)

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-DX	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	EW-DP-6:GW	10/22/13	1207	Water	11	X	1	
2.	EW-DP-7:GW	↓	1136	↓	12	X	1	
3.	EW-DP-8:GW	↓	1302	↓	13	X	1	
4.	EW-DP-9:GW	↓	1237	↓	14	X	1	
5.								
6.								
7.								
8.								
9.								
10.								

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: [signature] EPI 10/23/13
Received By: [signature] ALS 10/23/13 1150
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY
Fuels & Hydrocarbon Analysis: ~~5 (Standard)~~ 3 1 SAME DAY
OTHER:
Specify: EDD

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Suite 201 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

Groundwater Remediation System Work Plan for Estes West Express Trucking Facility, VCP # NW2532

Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

Prepared For:

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040

April 4, 2014

Prepared By:

Environmental Partners, Inc.
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027
(425) 395-0010

Josh Bernthal, P.E.
Senior Engineer

Doug Kunkel, L.G., L.H. G.
Principal Hydrogeologist

Project Number: 61901.4

QR____ TR____

1.0 INTRODUCTION

This Work Plan for groundwater impacts at the Estes West Express Trucking Facility has been prepared on behalf of Mr. David Pollart, the property owner, to facilitate remedial activities in groundwater at the property located at 2102 West Valley Highway North in Auburn, WA (the Site). The Site location is shown in Figure 1. This Work Plan has been prepared, and the remediation project is being performed, under Ecology's Voluntary Cleanup Program (VCP).

This work plan was prepared specifically for the field-scale remediation project being performed to remediate groundwater impacted by petroleum hydrocarbons, specifically diesel- and heavier-range petroleum hydrocarbons, at monitoring well MW-1, which is located at the northwest corner of the maintenance building at the Site as shown in Figure 2.

2.0 BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional No Further Action (NFA) determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on three years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 μg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or heavier-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from the VCP due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP number NW2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained at concentrations greater than MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CULs.

A 12,000-gallon diesel fuel UST was removed from the south side of the maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the UST decommissioning activities and soil and groundwater sampling results.

Ecology issued an Opinion Letter dated April 22, 2013, which indicated that additional information was required regarding the lateral and vertical extent of a migrating groundwater plume at the Site. In telephone and email discussions, the Ecology Site Manager requested an additional monitoring well near the southwest corner of the maintenance building and a monitoring well at the southeast corner of the former location of the 12,000-gallon diesel fuel UST that was removed in November 2012. EPI completed installation and sampling of these new wells, designated MW-5 and MW-6 respectively, on June 5th, 2013. The locations of new wells MW-5 and MW-6 are shown on Figure 2.

Groundwater samples collected from MW-5 and MW-6 were submitted for GRPH using Ecology Method NWTPH-Gx, BTEX using EPA Method 8021B, and DRPH and HRPH using Ecology Method NWTPH-Dx. Samples from both wells MW-5 and MW-6 were non-detect for GRPH, HRPH, and BTEX compounds; however, the samples from MW-5 and MW-6 had DRPH concentrations of 160 μg/L and 680 μg/L, respectively. The DRPH concentration in the sample from MW-6 exceeded the MTCA Method A CUL of 500 μg/L. Wells MW-5 and MW-6 were sampled again in August 2013 as part of the quarterly groundwater monitoring program. DRPH was again detected in samples from MW-5 and MW-6 at concentrations of 56 μg/L and 790 μg/L, respectively.

In a follow-up email communication with EPI on July 22, 2013, The Ecology Site Manager, Mr. Eugene Freeman, indicated that additional soil and groundwater sampling would be necessary to delineate the lateral and vertical extent of the soil and groundwater impacts in the vicinity of MW-1 and at the former 12,000 gallon diesel UST. Mr. Freeman's opinion is based upon concentrations of DRPH and HRPH greater than the MTCA CUL of 500 μg/L in samples from MW-1 observed since November 2011 and the DRPH concentration in the sample from MW-6, which also exceeded the MTCA CUL. Mr. Freeman indicated that it would be also necessary to demonstrate that there was no impact to Mill Creek located to the west of the Estes West facility.

In October 2013 EPI performed a Phase II Environmental Site Assessment (ESA) at the Site in response to Mr. Freeman's email request dated July 22, 2013. The scope of services for the tasks performed as part of the Phase II ESA was divided into four main tasks:

- Task 1: Coordinate with Ecology for approval of the planned probe locations and concurrence with the scope of services for the Phase II ESA.

- Task 2: Mark proposed probe locations and perform a private utility locate at each of the locations (see Figure 3 for probe locations).

- Task 3: Survey monitoring well measuring point elevations. Measuring point elevations for newer wells MW-5 and MW-6 were not surveyed after their installation. (Task 3 was performed concurrently with Task 2).

- Task 4: Perform soil and groundwater sampling and analysis.

Groundwater sample results, including data from the August 2013 quarterly sampling data, indicate that groundwater impacts are limited to two general areas of the Site: MW-1 and the surrounding area; and downgradient of the former 12,000-gallon diesel UST.

Probes DP-1 through DP-5 surround impacted well MW-1 in all four cardinal directions and to the southeast, which was thought to be the general groundwater flow direction based on historical data as shown in Figure 3. Analytical results from DP-1 indicate that groundwater impacts are not likely coming from the adjoining property to the north. The groundwater hot spot is at DP-3, which is at a location where previous remedial soil excavations left some impacted soil in place to maintain building foundation stability. Non-detections in the groundwater sample from DP-5 provide further indication that the general groundwater flow direction is not to the southeast as was thought based on historical data.

Probes DP-6 though DP-9 were placed at locations potentially downgradient of the former 12,000-gallon diesel UST based on historical (pre-Phase II ESA) data as shown in Figure 3.

DRPH detections in samples from DP-6 and DP-8 are likely attributable to the former UST. The detections of DRPH at concentrations less than their MTCA Method A CULs indicate that diesel impacts at concentrations greater than MTCA from the former UST extend to somewhere between well MW-6 and probes DP-6 and DP-8.

The HRPH concentration of 730 μg/L in the sample from DP-8 is not likely attributable to the former 12,000-gallon diesel UST. The two sampling locations downgradient of the former UST, MW-6 and DP-6, both have detections of DRPH but are non-detect for HRPH.

3.0 PURPOSE

Based on 10 rounds of quarterly groundwater monitoring and results from the Phase II ESA soil and groundwater impacts in the area surrounding MW-1 have been adequately characterized to design, install, test, and operate an active groundwater remediation system. Field parameter data, specifically dissolved oxygen (DO) and oxidation reduction potential (ORP), indicate that geochemical conditions in the aquifer are strongly reducing (anaerobic). Petroleum hydrocarbons are readily biodegraded by aerobic bacteria, which require aerobic geochemical conditions to be effective in that role. This work plan describes the proposed elements of a groundwater remediation system designed to increase DO concentrations in groundwater to enhance biodegradation of petroleum hydrocarbons in groundwater in the impacted groundwater surrounding well MW-1.

The goal of the remediation system is to attain compliance with Model Toxics Control Act (MTCA) Method A Cleanup Levels for diesel range organics (DRO) and oil range organics (ORO) in groundwater in the area surrounding MW-1 at the Site. If this remediation strategy is successful it might be applied to the impacted groundwater downgradient of the former 12,000-gallon diesel UST with the ultimate goal of obtaining a no further action determination (NFA) from the Washington State Department of Ecology (Ecology) for the site.

4.0 TASKS

The tasks necessary for installation and operation of the proposed Groundwater Remediation System are summarized below.

Task 1 – Remediation System Design

EPI has prepared figures showing the locations of air injection wells to be installed at the site, the design of the air injection wells, a schematic of the air supply piping, and design of the blower and instrumentation necessary for air injection into shallow groundwater at the site. These system design elements are presented as Figures 4 and 5.

Field data collected as part of groundwater sampling events performed in November 2013 confirmed the assumption that subsurface geochemical conditions at the site are anaerobic. Bacteria that metabolize petroleum hydrocarbons require aerobic geochemical conditions to thrive and effectively biodegrade DRO and ORO. The purpose of air injection is to provide oxygen, in the form of atmospheric air, to the shallow groundwater through a series of three air injection wells installed within the estimated footprint of the DRPH and HRPH impacts in groundwater at MW-1.

Task 2 – Remediation System Installation

EPI has solicited bids from qualified well drilling companies to install air injection wells in the area surrounding MW-1. EPI will oversee drilling and installation of three shallow air injection wells in the area surrounding MW-1 at the locations shown in Figure 4.

The three injection wells will be drilled to approximately 15 ft. below ground surface (bgs). Well screens will 1-ft lengths of Kerfoot Technologies C-Sparger® screen set to be fully submerged at 14 to 15-ft bgs, which will force the injected air into groundwater as microbubbles, increasing the surface area of the bubbles for more efficient oxygenation. The remaining well annulus will be sealed using hydrated bentonite chips and the surface will be completed in 8-inch diameter flush completion steel monument set in concrete.

A separate contractor will connect the wells to the blower using 1-inch diameter PVC piping stubbed out below the surface through the side of each of the well monuments. Air supply lines will be installed in trenches that will be appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement. The proposed alignment of air supply lines from the blower to each of the three wells is shown in Figure 5.

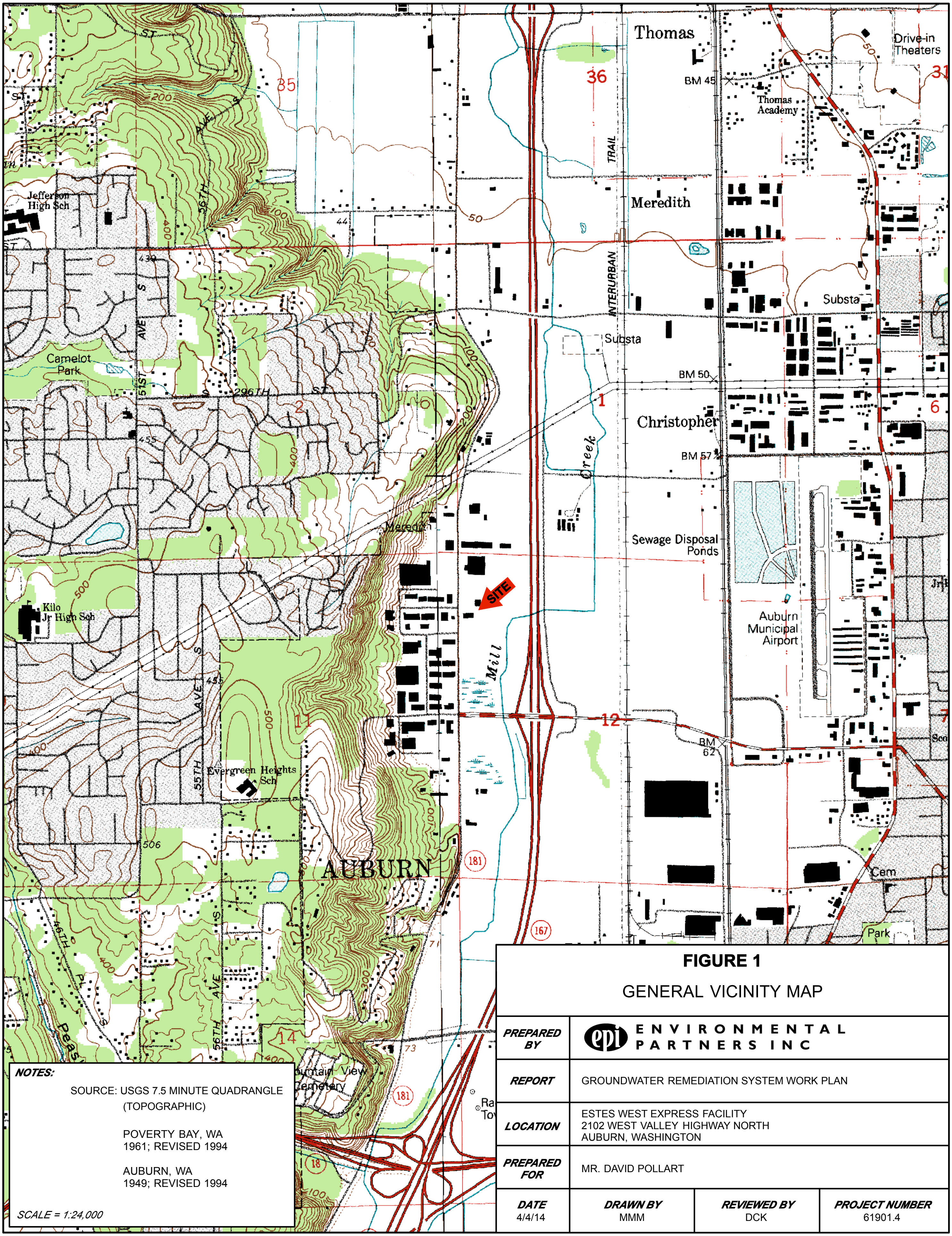
An appropriately-sized blower will be installed in the fenced area at the north end of the truck maintenance building at the approximate location of the current air compressor. 1-inch diameter PVC air supply lines will be installed in shallow trenches leading from the air compressor to each of the three air injection wells.

Task 3 – Operation and Monitoring

The system was designed with simplicity and ease of use in mind and as such it will be monitored during quarterly groundwater monitoring events. The initial indication of successful operation will be an increase in DO concentrations and ORP measurements in pure water from well MW-1. Longer-term success will be indicated by decreasing DRPH and HRPH concentrations in samples from MW-1 and increases in DO and ORP in wells MW-2 and MW-3, which are approximately 65 and 125 feet downgradient of MW-1, respectively.

5.0 SCHEDULE

EPI will schedule the proposed tasks immediately upon receipt of Ecology's written approval to proceed with implementation of this work plan. It is anticipated that the fieldwork for this installation of an active groundwater remediation system can be scheduled and completed within four weeks of receiving Ecology approval.



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1 GENERAL VICINITY MAP	
PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER REMEDIATION SYSTEM WORK PLAN
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
4/4/14	MMM	DCK	61901.4

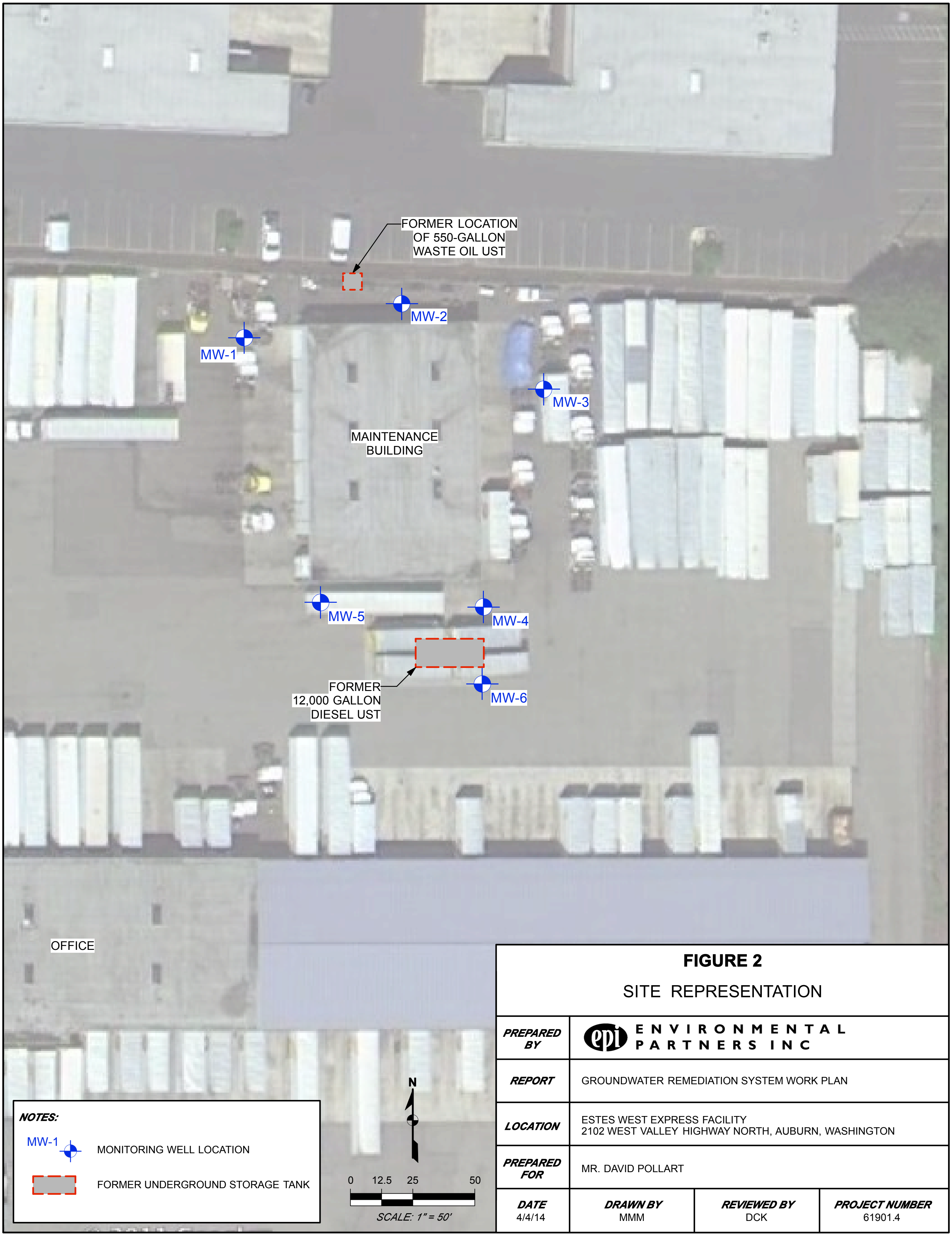


FIGURE 2

SITE REPRESENTATION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER REMEDIATION SYSTEM WORK PLAN
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
4/4/14	MMM	DCK	61901.4

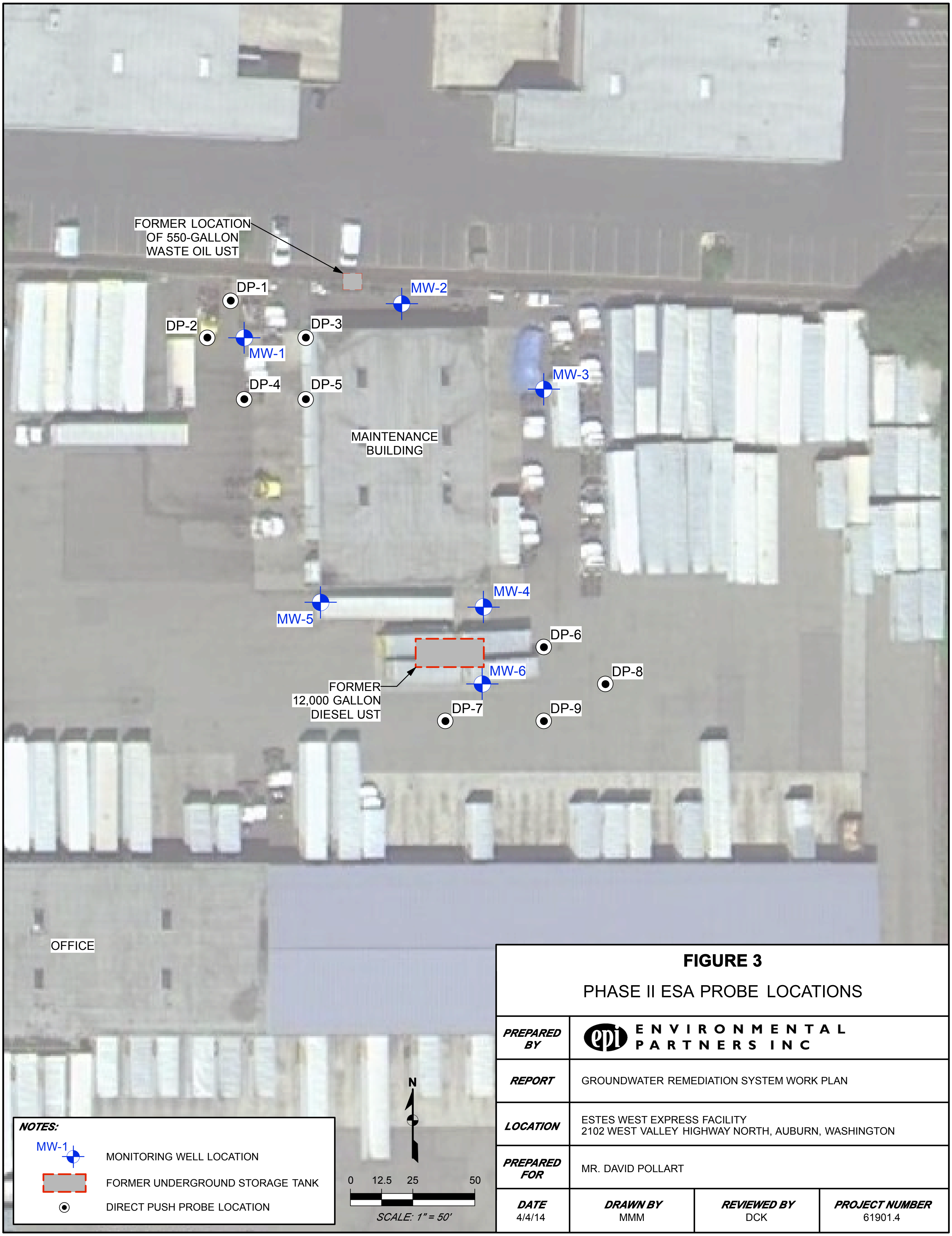
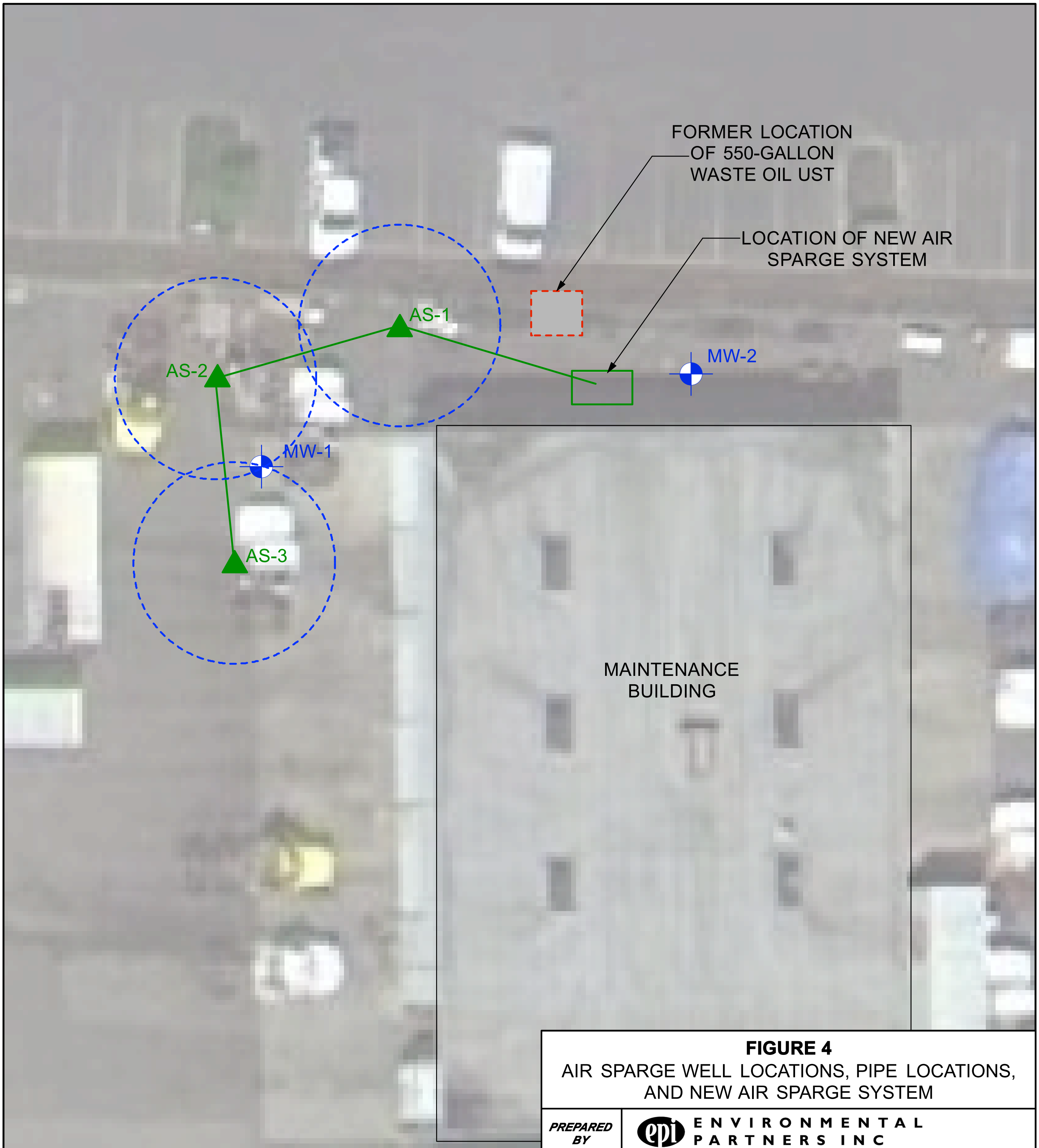


FIGURE 3

PHASE II ESA PROBE LOCATIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER REMEDIATION SYSTEM WORK PLAN
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
4/4/14	MMM	DCK	61901.4



NOTES:

- MW-1 EXISTING MONITORING WELL LOCATION
- PROPOSED AIR SPARGE WELL LOCATION
- APPROXIMATE LOCATION OF AIR SPARGE TRENCH
- APPROXIMATE RADIUS OF INFLUENCE (ROI)
- FORMER UNDERGROUND STORAGE TANK

FIGURE 4
AIR SPARGE WELL LOCATIONS, PIPE LOCATIONS, AND NEW AIR SPARGE SYSTEM

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	GROUNDWATER REMEDIATION SYSTEM WORK PLAN		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 04/03/14	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.4

PRE-LEASE ASSESSMENT

PROVISIONERS WAREHOUSE

2102 WEST VALLEY HIGHWAY NORTH

AUBURN, WASHINGTON

PRE-LEASE ASSESSMENT
PROVISIONERS WAREHOUSE
2102 WEST VALLEY HIGHWAY NORTH
AUBURN, WASHINGTON

Prepared for

US West Communications, Inc.
1600 Seventh Avenue Rm. 2708
Seattle, Washington 98191

2 December 1999

Prepared by

Roy F. Weston, Inc.
700 Fifth Avenue, Suite 5700
Seattle, Washington 98104-5057

W.O. # 05016-060-001-0001

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EXECUTIVE SUMMARY

Roy F. Weston, Inc. (WESTON®) has completed a Pre-Lease Assessment consisting of a Phase I environmental site assessment (ESA) and limited subsurface investigation, of a 6-acre property located at 2102 West Valley Highway North in Auburn, Washington (hereinafter referred to as the "site"). WESTON was engaged by US West Communications, Inc. (US West) to conduct this assessment and investigation in accordance with the American Society for Testing and Materials (ASTM) E 1527-97 guidelines and US West specifications. The principal objective of this assessment was to identify potential environmental liabilities associated with the present and historical use of the property, physical condition of the grounds, existing operational practices, and potential impacts from surrounding areas as set forth in a proposal submitted to US West dated 18 November 1999. The purpose of the limited subsurface investigation was to address known existing contamination at the property, and to evaluate the current conditions of soil and groundwater in these problem areas. The information presented in this report was obtained from a review of property records and previous environmental investigations, a reconnaissance of the site and interviews with the property owner and regulatory officials, and collection of soil and groundwater samples for chemical analyses.

Site Description and Background

The site includes one main refrigerated warehouse building, a maintenance garage, and parking areas, one diesel (12,000-gallons) underground storage tank (UST) with associated pump island, one waste oil UST (550-gallons), and an oil-water separator. Several aboveground storage tanks (ASTs) used to store oils and propane gas as well as an AST for a waste-oil burning heater are located inside the maintenance garage. Historical research of the site and adjacent properties indicated that the area was undeveloped until mid 1980's. Provisioners Express, Inc., a refrigerated goods carrier and distribution company, was the only site tenant since 1988. Adjacent properties in the site vicinity consisted of business park developments and small manufacturing.

Off-Site Environmental Issues

A review of regulatory agency lists by VISTA Environmental and Washington State Department of Ecology records indicated that there were several Resource Conservation Recovery Act (RCRA) generators, a RCRA violator, several UST operators, two LUST facilities, and three facilities undergoing cleanup activities within ½-mile downgradient and cross gradient from the site. The site was identified by the VISTA report as a UST operator and as undergoing cleanup of groundwater and soil.

WESTON identified no environmental issues at off-site properties that could pose an environmental concern to the site from the adjacent properties reconnaissance, historical records, or regulatory records reviewed during this assessment.

On-Site Environmental Issues

WESTON identified several on-site environmental issues related to the site. These issues include past chemical management practices, releases and compliance of the underground storage tanks (USTs), and documented environmental impacts to soil and groundwater.

Past Chemical Management Practices

It was evident from the site reconnaissance that housekeeping practices and chemical management of the maintenance garage were poor and that the garage appeared to have been used as a chemical storage area for the facility. Numerous chemical containers ranging in size from 0.5- to approximately 55-gallons, were stacked or carelessly accumulated throughout the garage. Among the chemicals observed were a wide variety of grease and oil products, gasoline, solvents, and xylene. Evidence of numerous past and current chemical spills/drips/container leakage was observed on the floor surfaces of this facility. A wet oil-like stain was observed on the floor surface underneath the three oil ASTs. A rusted 55-gallon drum from a construction chemical was observed leaking into a crack on the floor and directly into a floor drain. Heavy staining near gasoline and solvent containers and minor to moderate cracks on the concrete floor surfaces was also observed throughout the garage during the site reconnaissance. Chemicals stored in the main refrigerated warehouse were confined to the office area and consisted of small containers of household chemicals.

Underground Storage Tanks (USTs)

As previously indicated, the facility utilized two USTs, one containing used oil and the other containing diesel fuel. During a Phase I ESA conducted by a prior prospective buyer, several soil borings were advanced in the vicinity of both USTs. Free product as oil was observed in a soil boring near the waste-oil UST and concentrations above the Model Toxics Control Act (MTCA) Method A Groundwater Cleanup Levels for gasoline range, diesel range, and motor oil range organics were detected in the groundwater (AGI 1998).

Based on this investigation the site owner conducted removal actions of the waste-oil UST and associated floor drains and line. Two excavations, one outside and one inside the northwest corner of the maintenance garage, were completed to remove contaminated soil. Conversations with the site owner indicated that the contamination resulted from improperly installed lines and sump from floor drains inside the building leading to the waste-oil UST. The waste-oil UST, floor drains and drain lines were removed in October to November 1998. Documents reviewed suggest that most of the impacted soil was removed. However, due to physical constraints related to the structural integrity of the building, the UST assessment subcontractor estimated that approximately 140 cubic yards of contaminated soil still remain in place (EMR 1999d).

UST permits were issued by the Department of Ecology for both USTs for the years 1991, 1992, 1993, and 1994; and tightness testing results for the diesel UST and lines for March 1996, April 1997, and April 1998. Results from all three tightness tests conducted on the diesel UST indicated both tank and lines were tight in all three occasions. Documents reviewed indicated that Provisioners acquired UST liability insurance for both USTs since 1996 to April 1999 and that tightness tests for the USTs were required by the policy. There were no tightness tests for the waste-oil UST in the documents provided.

The diesel UST is currently empty but otherwise active (i.e., it remains connected to the fuel dispensers). However this tank does not meet Ecology's 1998 UST Construction Standards, and would require the following minimum upgrades: tank and fuel piping corrosion protection, leak detection for tank and piping, and overfill prevention devices to shut off delivery at 95 percent capacity. In addition, the vent pipe is not tall enough to comply with the Uniform Fire Protection Code. The estimated cost for upgrading tank is $32,000, exclusive of removing contaminated soil, if any is encountered during construction.

Documented Environmental Impacts

During a subsurface investigation conducted in November 1998, 16 push-probes were advanced inside the garage and soil samples collected. Selected soil samples were analyzed for oil and diesel range hydrocarbons (by NWTPH-Dx method) and for benzene, toluene, ethylbenzene, xylene (BTEX). Analytical results indicated that concentrations above MTCA Method A Soil Cleanup Levels (WAC 173-340-740) for oil, diesel, and xylene remain beyond the extent of the waste-oil UST excavation inside the garage.[1]

In December 1998, three groundwater monitoring wells were installed at the site and a quarterly groundwater monitoring program was implemented; a fourth monitoring well was installed in January 1999 to augment the quarterly program. During the December 1998 sampling event, BTEX compounds and gasoline range hydrocarbons were detected in monitoring well MW-2, which is immediately east and slightly cross-gradient (hydrologically) of the waste-oil UST excavation. The concentration of benzene exceed the MTCA Method A Groundwater Cleanup Levels (WAC 173-340-720) (EMR 1999d). Subsequent rounds of sampling conducted in April and September 1999 detected xylene and benzene, respectively, exceeding the Method A Cleanup Levels in MW-2. The presence of BTEX compounds in this well suggests the possibility of a gasoline source other than the waste oil tank.

During a limited subsurface investigation conducted as part of this assessment, WESTON advanced five push-probes in the vicinity of the diesel and waste-oil USTs excavations at the maintenance garage, and collected groundwater samples from push-probes and existing groundwater monitoring wells. Analytical results of soil and groundwater samples collected from these probes indicated the presence of diesel, motor oil, gasoline, and volatile organic compounds in both soil and groundwater in the vicinity of the waste-oil UST and floor drains excavations. For soil, acetone and methylene chloride were detected above the MTCA Method B Levels. For groundwater, benzene was detected in MW-2 above the MTCA Method A Level.

[1] The *Independent Remedial Action Report* (EMR 1999d) also indicates exceedances of the Method A cleanup levels for mineral spirits/stodard solvents, which were present with concentrations up to 4000 mg/kg. However, MTCA Method A does not prescribe a cleanup level of these constituents.

Conclusions

The results of this Pre-Lease investigation have identified several adverse environmental conditions associated with the site that pose a potential liability. These conditions include the past chemical management practices, releases and compliance of the underground storage tanks (USTs), and documented environmental impacts to soil and groundwater.

The evidence of current and past spills and presence of cracks on the site floors could represent a pathway for contaminants to reach soils and groundwater underneath the site. In addition, the fact that groundwater and subsurface soil show detected concentrations of BTEX and other VOC compounds unrelated to the waste-oil UST raises questions regarding additional source(s) in this area. These compounds are often identified as precursors of migration of gasoline compounds and can also be an indication of the presence of solvents in groundwater and soil. Based on this information, WESTON believes there is a significant environmental concern from the reported releases of petroleum hydrocarbons, VOCs, and BTEX compounds to soil and groundwater at the site's maintenance garage.

Recommendations

WESTON recommends that that the following actions are taken by US West in regards to its lease of the property:

- The owner should remove and properly dispose all chemicals/petroleum products, parts, equipment, and vehicles. WESTON further recommends that copies of waste manifests of all chemical disposal be provided to US West to ensure compliant off-site disposal/treatment. In addition, the garage floor drain leading to the oil-water separator and the oil-water separator itself should be cleaned prior to US West occupying the site.
- US West should obtain full indemnification from the property owner for any environmental liability due to soil and groundwater contamination at the site. Please note, however, that such indemnification will not shield US West from liability by state and federal environmental regulators.
- US West should conduct a baseline environmental survey prior to occupying the facility. This survey should include substantial soil and groundwater sampling throughout the property to fully identify pre-lease environmental impacts.
- As soon as practical, the owner should furnish US West a "No Further Action Letter" from Ecology with a restrictive covenant to the owner to continue remedial and groundwater monitoring activities. Implementation of the monitoring program should remain in the responsibility of the owner with analytical data furnished to US West.
- The owner should continue to explore and implement remedial alternatives for the site as soon as possible to prevent further impact to groundwater from contaminated soils remaining at the site. The lease agreement should allow for US West's approval of any such implementation to ensure site operations are not detrimentally impacted.
- In the event that US West desires to use one or both UST system these should be upgraded to comply with current UST regulations or retrofitted to satisfy US West needs prior to

US West signing a lease for the facility. If US West does not desire to operate one or both UST systems, the owner should remove or close in place the USTs in accordance to current regulations. In the event US West requires fuel storage on the facility, WESTON recommends that US West not utilize either of the existing tanks, but instead install separate tanks distant from these tanks.

- Strict accountability of all chemical products should be maintained by US West throughout its leasehold interest in the property as a means to demonstrate full accountability.
- US West should obtain a copy of the site's National Pollutant Discharge Elimination System (NPDES) permit and attendant stormwater management plans. Future US West occupation and anticipated activities of the site will likely trigger permitting, Spill Prevention Control and Countermeasures Plan (SPCC) and/or Stormwater Pollution Prevention Plan preparation.

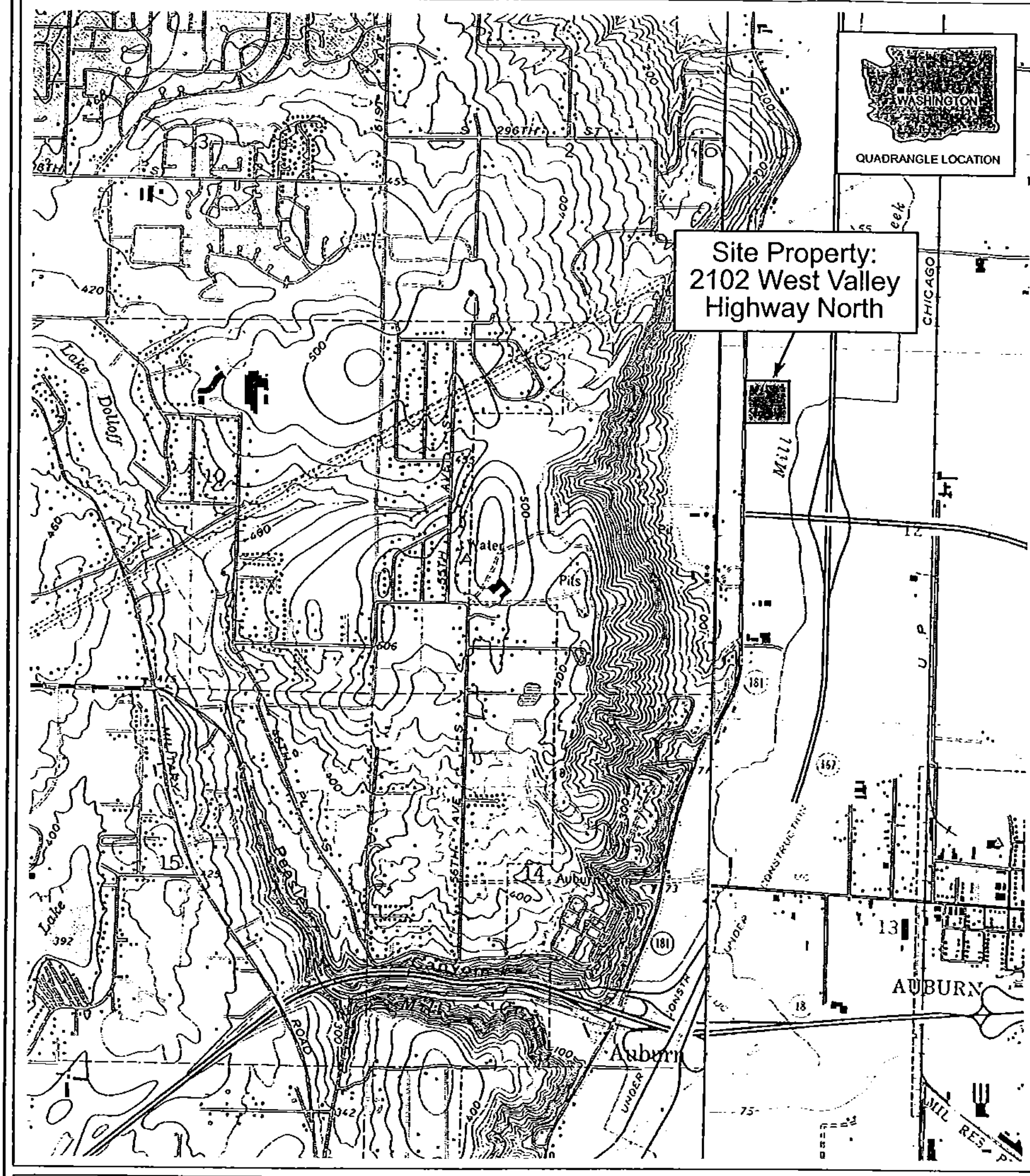
SECTION 1

INTRODUCTION

At the request of US West Communication, Inc. (US West), representatives of Roy F. Weston, Inc. (WESTON®) conducted a Pre-Lease Assessment, consisting of a Phase I environmental site assessment (ESA) and limited subsurface investigation, at the Provisioners Express, Inc., 2102 West Valley Highway North, in Auburn, Washington, (hereinafter referred to as the "site"). Figure 1-1 depicts the site location map.

The purpose of the Phase I ESA was to identify potential environmental liabilities associated with the present and historical use of the property, physical condition of the grounds, existing operational practices, and any impacts from surrounding areas as set forth in a proposal submitted to US West dated 18 November 1999. The purpose of the limited subsurface investigation was to address known existing contamination at the property and to evaluate the current conditions of soil and groundwater in these problem areas. The Phase I ESA was conducted in accordance to ASTM Standard E 1527-97 *Standard Practice for Environmental Site Assessments* and US West specific objectives. The assessment consisted of an on-site inspection, discussions with available facility representatives, review of associated site documents, review of pertinent regulatory agency files, an evaluation of potential liabilities, and soil and groundwater sampling surrounding the site maintenance garage.

During the assessment, WESTON personnel trained to recognize both short- and long-term actual and potential environmental hazards and liabilities employed standard environmental investigation procedures. Although the assessment was thorough, the conclusions provided herein are based upon information provided to WESTON and are, therefore, no guarantee that additional problems will not arise in the future. WESTON reviewed available data at the facility and regulatory agency files. WESTON does not provide any warranty for this property or certify future use of the property based upon this assessment.



Source: USGS Auburn (1973) & Poverty Bay (1981)

0 1000 2000
Scale in Feet

Site Location Map
2102 West Valley Highway North
Auburn, WA

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Figure
1-1

99-0450 Fig1-1.ai

SECTION 2

SITE DESCRIPTION

2.1 PHYSICAL CONDITIONS

The site consists of an approximately 6-acre property located at 2102 West Valley Highway North, approximately 2 miles northwest of the city of Auburn, King County, Washington (Figure 1-1). The site is located in property located in Section 12, Township 21 North, Range 4 East. The site is currently vacant, and includes one main refrigerated warehouse building, a vehicle maintenance garage, and paved areas used for parking. Figure 2-1 depicts the site vicinity map.

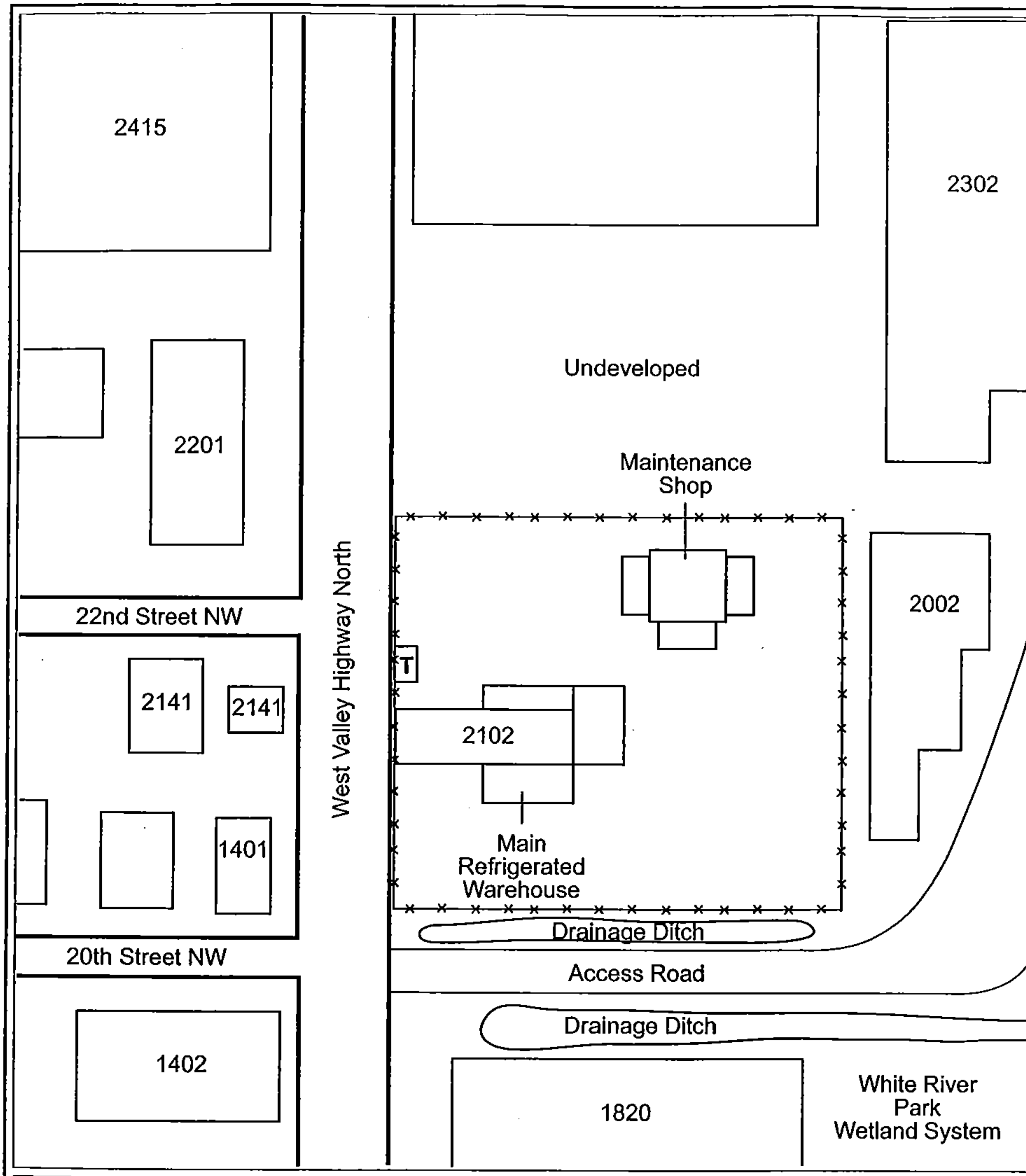
Two underground storage tanks (USTs) and a pump-island are located around the maintenance garage building along the north perimeter of the site. A 12,000-gallon diesel UST and associated pump-island are located along the south side of the maintenance garage, and a 550-gallon waste-oil UST is located along the north side of the maintenance garage. An oil-water separator was also observed along the south side of the maintenance garage near the pump-island assembly. Several ASTs with different types of oil and one propane-gas AST were observed inside and outside the maintenance garage. Figure 2-2 depicts the maintenance garage plan view.

The majority of the site consists of concrete or asphalt pavement surrounding the site buildings and loading docks. The topography of the site and vicinity are relatively flat with an elevation of approximately 65-feet above mean sea level, (USGS 1973). Mill Creek and the White River Park Wetland System are the nearest surface water bodies located at the southeast adjacent property, approximately 500-feet southeast of the site. The Green River is located approximately 2 miles east of the site.

A reconnaissance of the site and adjacent properties was conducted on 12 November 1999. A discussion of the adjacent properties is provided in Section 5.

2.2 GEOLOGIC CONDITIONS

The Soil Survey of King County Area, Washington (SCS 1973) classifies the soil in the site vicinity as the Norma sandy loam part of the Norma Series. The Norma series is made of poorly drained soils formed in alluvium under sedges, grasses, conifers, and hardwoods. The Norma sandy loam occurs in strips 25 to 300 feet wide with slopes of less than 2 percent. In a typical soil profile, the A-horizon ranges from black to very dark brown sandy loam with as much as 15 percent gravel and the B-horizon is typically a sandy loam in places stratified with a silt loam and loamy sand with as much as 35 percent gravel in places. In areas near northwestern Auburn, some Norma soils have an organic layer as thick as 12-inches. Permeability is moderately high and the seasonal water table is at or near the surface. The unit is characterized by a moderately high to high available water capacity, slow runoff and slight erosion hazard. Soils are mostly used for pasture and, in drained areas, for row crops.



Not to Scale

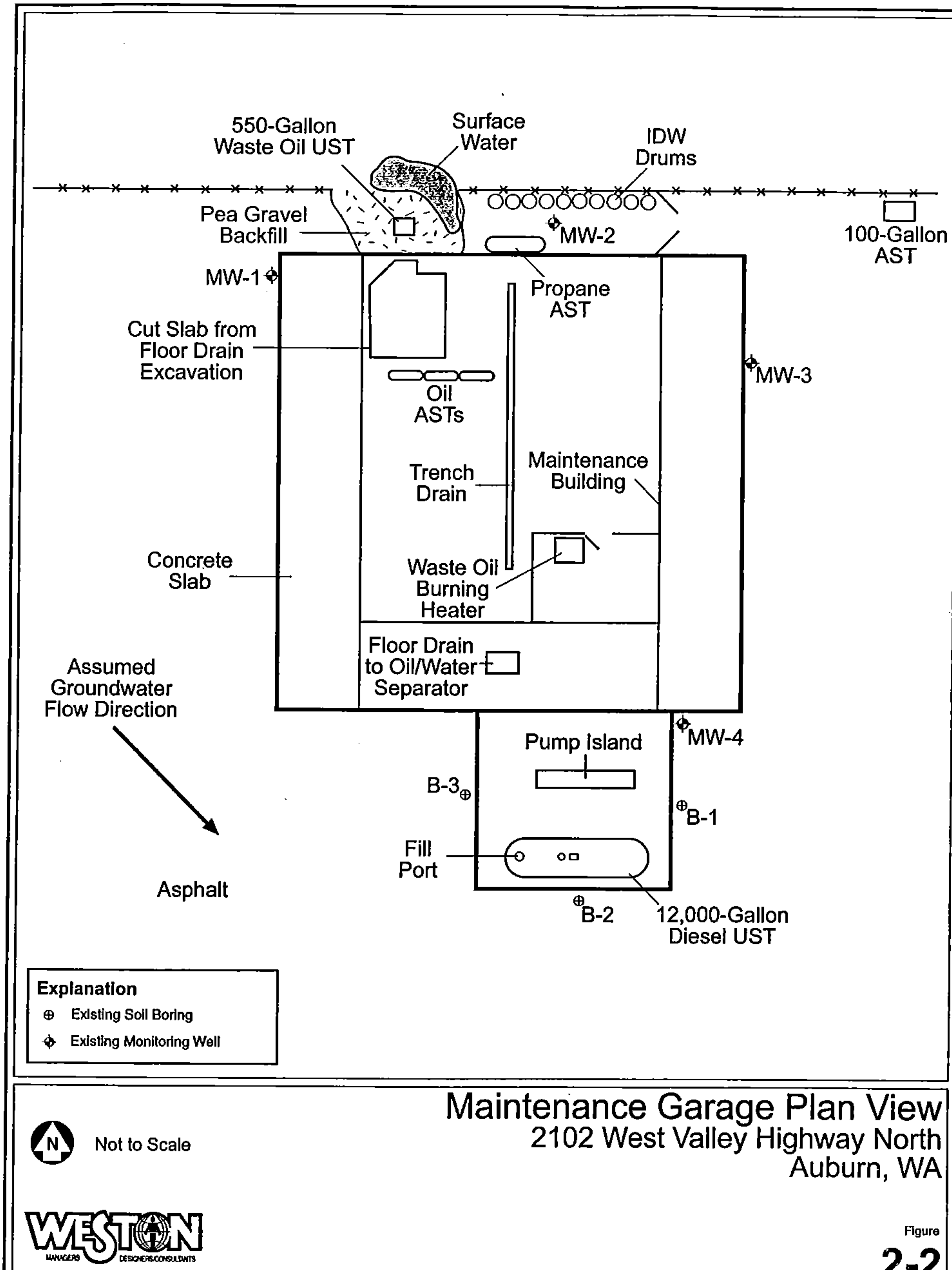
Site Boundary

T Transformer

Site and Vicinity Map
2102 West Valley Highway North
Auburn, WA

Figure
2-1

99-0450 Fig2-1.ai



Maintenance Garage Plan View
2102 West Valley Highway North
Auburn, WA

Figure
2-2

99-0450 Fig2-2.ai

The geologic strata which underlies the site consists of gravel and sand deposited in the Quaternary period (less than 1.6 million years ago [Mullineaux 1965]). This unit is part of the Frazier Glaciation, which represents the last glaciation in the south Puget Sound. Sediments of this unit consist of deposits of sand and gravel deposited by the White River and reworked by the Green River (Mullineaux 1965).

2.3 HYDROLOGIC CONDITIONS

The majority of drinking water in western Washington is obtained from production wells in the Puget Sound basin and Georgia depression. These wells draw water from aquifers in the Pleistocene alluvial deposits of the region resulting from a series of glacial advance or retreat events. Major aquifers in the southern part of the Puget Sound basin (including southwestern King County, northeastern Pierce County, central Thurston, and north-central Lewis Counties) consist of coarse and permeable gravels (Pleistocene alluvium) with very high yields. With the exception of the city of Tacoma, the vast majority of municipal/industrial and single-domestic water supplies are drawn from wells in these alluvium deposits (Noble, undated).

Groundwater generally flows from areas of high surface elevation to areas of low surface elevation. Shallow groundwater flow direction can often be estimated by examination of surface topography and may be affected by nearby surface water body flow direction, drainage ditches, streets, utility trenches, and paved areas.

The surface of the site is relatively level with deep drainage channels along the north and south sides of the site. The drainage channel identified along the south boundary of the site was observed flowing to the White River Park Wetland System located on the southeast adjacent property. Based on topography and surface features, shallow groundwater at the site would be expected to flow towards these drainage channels surrounding the site, towards the wetlands, and towards Mill Creek running north-south east of the site. Groundwater was encountered at a depth of 4.5 to 5 feet bgs and flowing to the southeast, as estimated from WESTON's limited subsurface investigation conducted at the site and data from existing groundwater monitoring wells.

SECTION 3

CURRENT SITE CONDITIONS

The following sections summarize the current use and conditions at the site observed during this investigation. WESTON personnel conducted the site visit and interview with the site owner on 12 November 1999.

3.1 INTERVIEW

WESTON interviewed Mr. David Pollart, owner of the property and Provisioners Express, Inc., the previous site occupant, on 12 November 1999. The following information was obtained from the interview:

- The site was undeveloped prior to 1988, at which time was developed by Mr. Pollart as the Provisioners facility.
- Mr. Pollart has been the owner of the site since 1985, and Provisioners has been the only tenant at the site.
- Two USTs, one diesel (12,000-gallons) and one waste oil (550-gallons), are located north of the main warehouse building around the maintenance garage. A pump-island is also located on top of the diesel UST. Mr. Pollart stated there were no USTs at the main refrigerated warehouse building.
- Several ASTs, used to store oils for truck maintenance, are located inside the maintenance garage. In addition, WESTON observed another used-oil AST inside the maintenance garage connected to a waste-oil burning heater. According to Mr. Pollart, the heater was used to provide heat to the maintenance garage during the winter months for the last five years Provisioners was in operation. Mr. Pollart stated that prior to that, all the waste oil was hauled off-site. A propane gas AST is located along the north side of the maintenance garage. Mr. Pollart was not aware of any additional ASTs at the site.
- Mr. Pollart indicated the used oil UST was connected to two floor drains inside the shop and that leakage from improperly installed lines into this UST produced the contamination currently present at the site. He also indicated that the site is currently being remediated under Washington's State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP).
- Mr. Pollart indicated both excavations observed outside and inside the maintenance garage are related to the contamination present at the site. The outside excavation was conducted while attempting to remove the waste oil UST. During this excavation they noticed the UST was in good condition, however, the improperly installed lines and sump had leaked. He stated that while excavating the impacted soil, more contamination was encountered underneath the building, and therefore, excavated the lines and floor drains inside the building.

- Mr. Pollart indicated that the long floor drain oriented north-south inside the maintenance garage leads to the oil water separator located between the garage and the pump-island. Mr. Pollart stated that the oil-water separator had been cleaned several times and that the sludge/contents had been hauled off-site by Evergreen Services. Mr. Pollart indicated he did not remember how many times this was done and does not have any knowledge of manifests for the sludge/content disposal.
- The only chemicals used in the facility other than regular cleaning supplies are in the maintenance garage for truck servicing and they mostly consists of oils, grease, gasoline, and petroleum products used in truck maintenance.
- Ecology is the only agency currently monitoring the site.

3.2 SITE RECONNAISSANCE

WESTON conducted a site reconnaissance on 12 November 1999. The purpose of the site reconnaissance was to examine the site for areas of potential environmental concern. Photographs taken during the site reconnaissance are presented in Appendix A.

The site consists of an approximately 6-acre property occupied by one main refrigerated warehouse building, a maintenance garage, and parking areas. The buildings consist of concrete wood and steel framed buildings with concrete floors. Two USTs, one pump-island, and one oil-water separator are also present around the maintenance garage.

At the time of the visit, the site was vacant, although a considerable amount of equipment, chemicals, furniture, and vehicles belonging to the previous occupant were observed throughout the site. It was evident that poor housekeeping practices and chemical management were used at the site, as detailed in the following sections.

3.2.1 Main Refrigerated Warehouse

Based on conversations with the site owner, no manufacturing was conducted at the site. Distinct areas identified inside the main refrigerated building consisted of the main warehouse area and loading docks, the refrigerated warehouse area, employee's lunch room, several utility closets, several restrooms, and office space. At least 16 loading dock bay doors were identified in the main warehouse. The office space was consolidated to the front of the building (towards West Valley Highway) and consisted of two stories.

During the site visit, a WESTON representative noticed that the entire warehouse floor (refrigerated and non-refrigerated) contained numerous refrigerated display cases, metal sinks, and refrigerators such as those typically used in food retail related facilities. Other items observed included, industrial scales, battery- and mechanically-operated pallet jacks, numerous boxed light fixtures, business files, office furniture, and other miscellaneous boxes. All the equipment observed was placed close to each other with minimal space between the units, thereby inhibiting inspection of several areas of the building. Minor staining and cracking of the concrete floors was observed throughout the warehouse area. Stains observed resembled water stains, paint, and dirt. Several refrigeration units were observed inside the refrigerated area of the warehouse. None of these units was in use, and no evidence of leakage was observed during the reconnaissance. One three-phase freestanding transformer and several electrical panels were observed in the northwest area of the main warehouse floor. Minor staining, similar to that observed throughout the warehouse floor, was identified on the floor surfaces surrounding this transformer. No corrosion or evidence of oil leaks from this transformer was observed during the reconnaissance. The main warehouse construction consisted of concrete and steel framed building with a flat wood panel and wood beam roof, and fluorescent lights. A heating, ventilation, and air conditioning (HVAC) system was identified on the roof of the warehouse.

Chemical storage areas observed inside the main warehouse building during the site reconnaissance were confined to the office area; inside cabinets, restrooms, lunchroom, and utility closets. The only chemicals identified consisted of typical household cleaners in small containers and sprayers of 0.5 pint to 1-gallon capacity. An approximately 40-50-gallon capacity water heater was observed inside one closet in the lower floor of the office space. There were no visual indications of leaks or spills on the floor surfaces surrounding this water heater.

The office space area consisted of wood and wallboard walls, 3-foot by 2-foot acoustic ceiling, fluorescent lighting, 1-foot by 1-foot vinyl floor tiles in the restrooms and first floor office space, and carpet in the upper floor office space. Equipment observed in the office areas consisted of numerous boxes of business files, office furniture, office equipment, and office supplies.

3.2.2 Maintenance Garage

The maintenance garage is located near the north-central boundary of the site and consists of one building with a small wood built-up office area. Other distinctive areas observed consisted of a small office and engine repair area and a parts storage area. All areas in the inside southeast corner of the garage were surrounded by a chainlink fence. The maintenance garage was used by Provisioners as a truck fleet maintenance facility until 1998 when they ceased operations at the site. Several storage racks or shelves with numerous replacement parts such as ball bearings, car seats, brake pads, lights, relays, bolts, filters, hubs, thermostats, belts, brake plates, and others were observed during the reconnaissance.

Equipment observed inside the garage included the following: a semi trailer, a large industrial air compressor, several battery- and propane-operated forklifts and pallet jacks, overhanging oil dispensers, small space heaters, vehicle part cleaning stations (with associated 30-gallon drums), numerous fire extinguishers of different capacities, a spot welder, battery chargers, re-tooling equipment, grease guns, a waste-oil burning heater, a free-standing two-phase transformer, numerous tools, tool racks and tool boxes, office furniture, filing cabinets, and office supplies.

In addition to this equipment, several ASTs and a long floor drain were observed inside the maintenance garage during the reconnaissance. Three of these ASTs were labeled as containing several types of lubricating oil and were of approximately 100-, 100-, and 400-gallon capacity. These ASTs contained varying amounts of product and appeared to be connected to the overhanging oil dispensers observed near the northwest area of the garage. Very heavy and wet oil-staining and minor to moderate cracks were observed on the concrete floor surfaces underneath and around all three ASTs. Another AST, approximately 500-gallons, was identified at the southeast area of the garage. This AST was part of a waste-oil burning heater, which according to Mr. Pollart, was used to heat the garage during the winter months. Moderate to heavy oil-staining and minor cracks were also observed on the floor surfaces surrounding this AST. As mentioned earlier, the owner of the property stated that the floor drain was connected with the oil-water separator located on the exterior south area of the garage.

Aside from the ASTs, chemical storage areas within the maintenance garage mainly consisted of floor space; however, several storage cabinets and shelves were also used for chemical storage. Numerous chemical containers ranging in size from less than ½-pint to 55-gallons were observed throughout the site. Chemicals observed during the site visit consisted among others of:

- Diesel-fuel supplement (1 to 2-gallon containers).
- Bonding compound.
- Rust guard (1-pint spray).
- Brake cleaner.
- Brake fluid.
- Motor and 2-cycle oil (1-quart to 55-gallon containers).
- Upholstery cleaner, and other general household cleaners.
- Chevron Delo grease NLGL 2 (1- to 55-gallon containers).
- Gas cylinders (7-15, 15- to 20-gallon refrigerants, propane, welding gases, and others).
- Solvents (2 parts washing stations with partially full 30-gallon holding tanks and small containers of 1-5 gallons).
- Refrigerants (0.5- to 1-gallon containers).
- Degreaser (1/2-pint to 1-gallon containers and sprays).
- Xylene (5-gallon metal container, empty, inside a 55-gallon drum used for trash).
- Gasoline (numerous 1- to 5-gallon containers partially full and piled on top of each other on a wood pallet).
- Burke Tilt Free Bond Breaker (55-gallon drum, rusted partially bulged, leaking from bottom into floor crack and drain).
- Concrete cleaner (one plastic 30-gallon drum).
- Hydraulic oil (1- to 5-gallon containers).
- Transmission oil, gear oil, automatic transmission fluid, motor oil, synthetic lube oil (1- to 55-gallon containers).
- Antifreeze (1-gallon containers).
- Asphalt patch (5-gallon containers).

- Lacquers, enamel, thinner, paint reducer, paint (1/2- to 5-gallon containers).

Material Safety Data Sheets (MSDSs) for these chemicals were not observed posted at the site.

Very heavy staining of walls and concrete floor surfaces was observed throughout the maintenance garage. Minor to moderate cracks were also observed on these concrete floor surfaces, very often near these stained areas. Very heavy and wet oil-like stains were observed underneath the oil ASTs, and were similarly observed near grease 55-gallon drums, oil 55-gallon drums, part cleaning stations, forklifts and pallet jacks, and gasoline container pile. A rusted and partially bulged 55-gallon drum labeled as "Burke Tilt Free Bond Breaker" was observed leaking directly into floor cracks and the floor drain. Several empty or partially full 55-gallon drums with what appeared to be trash were observed on the southwest area of the garage. An empty 5-gallon metal container labeled as xylene was observed inside one of these drums. Numerous containers of a variety of chemical were also observed on shelves. Areas of these shelves were heavily stained with what appeared to be petroleum products.

Housekeeping practices in this facility appeared to have been poor. Chemical containers were placed on wood pallets in a hap-hazardous manner and no secondary containment capacity was evident. Chemical storage and spill containment practices observed during the site visit represent a potential for environmental liability to the site.

3.2.3 USTs and Site Excavations

3.2.3.1 Waste Oil UST

Two open excavations were observed during the site reconnaissance; one outside the northwest corner of the maintenance garage, and one inside the northwest corner of the maintenance garage (Figure 2-2). Based on conversations with the site owner and documents reviewed at the site, both excavations are related to contamination found from improperly installed lines and sump from floor drains inside the building leading into a waste-oil UST. According to a previous Phase I ESA and limited site investigation (AGI 1998), free product was found in a soil boring advanced in the vicinity of the 550-gallon waste-oil UST, which led to the excavation of the UST.

After the tank's removal, more contamination was found underneath the building. The owner proceeded to excavate inside the building by removing the concrete floor slab, floor drains, and excavating the contaminated soil. Both excavations were filled with clean gravel, and the UST, which appeared to be in good condition, was nested into the gravel and covered. Both the inside and outside excavations are currently filled in with pea-gravel but remain uncovered. The UST was not re-installed and neither the drain line nor floor drains were re-connected. The system is not operational, and the tank has not been decommissioned in accordance with State regulations. Some heavy oil-like stains were observed on the garage north wall and gravel fill in the waste-oil tank excavation area.

3.2.3.2 Diesel UST

A 12,000-gallon diesel UST and associated pump island were identified at the exterior southeast corner of the maintenance garage. Heavy staining of the concrete floor was observed around the pump-island. However, no sheen was observed in rainwater running towards a floor drain located immediately south of the pump, which is reportedly connected to the oil-water separator. Upon inspection of the exterior areas of the garage, evidence of an earlier environmental investigation was identified in the form of four groundwater monitoring wells and several soil borings in the vicinity of the diesel UST and the waste oil UST (Figure 2-2).

According to the site owner, the diesel UST was pumped dry after Provisioners ceased operations in 1998. However, the UST has not been upgraded with overfill and spill systems, nor has it been decommissioned in accordance with Washington's State Department of Ecology UST regulations. According to the site owner, the site is under Ecology's Voluntary Cleanup Program, and the soil borings and groundwater monitoring wells were drilled/installed to assess soil and groundwater conditions surrounding these UST systems. A history of regulatory actions conducted at the site are presented in Section 6, Environmental Records Review.

3.2.4 General Observations

At least ten 55-gallon drums were observed lined against the north boundary fence behind the maintenance garage. These drums were labeled as purge water, decon water, and soil cuttings from the soil borings and groundwater monitoring well installation and sampling.

Several additional drums were observed throughout the parking areas and inside a semi trailer parked against the fence at the northeast corner of the site. The drums in the parking area were empty for the most part and appeared to be used for trash collection. Of the 55-gallon drums inside the semi trailer, six were labeled antifreeze, three of which were placed on a wood pallet and were partially full, and one had a pump installed at the top bung. The other three drums observed appeared to be empty. At least five plastic 55-gallon drums were also inside this trailer. They appeared to be empty and had no labels attached. Two 5-gallon containers were also observed, one of which was labeled "waste refrigerant" and was partially full. Only minor stains and no visual indications of leakage were observed around these containers. Numerous refrigerated and non-refrigerated semi trailers, two small distribution trucks, one forklift, two pick-up trucks, one abandoned vehicle, and one semi truck cab were observed around the parking areas and loading docks. Some of these vehicles were open and empty. WESTON observed no visual indications of leakage or major stains surrounding these vehicles.

Two solid waste receptacles were observed along the east loading docks of the main refrigerated warehouse and near the pump-island at the maintenance garage. Minor staining was observed on the concrete floors surrounding these containers. WESTON observed no hazardous materials disposal into these containers during the site visit.

Several large metal receptacles, a makeshift break room, wooden crates, storage units, storage racks, storage cabinets, and some office furniture, trash, metal supports, a scrap metal pile, and small empty plastic containers were observed near the west loading dock of the main refrigerated warehouse and along the north fence. These containers appeared to be empty and only minor staining of concrete floors was observed around them.

What appeared to be one 100- to 200-gallon AST with a hose dispenser assembly, and one portable oil dispenser labeled as motor oil were observed near the east and west sides respectively of the maintenance garage. WESTON observed only minor stains and no visual indications of leakage around these units. However, WESTON believes these units are potentially full and could pose an environmental concern to the site.

Stormwater catch basins were observed throughout the parking areas during the site reconnaissance. WESTON observed no evidence of improper chemical disposal or sheen on standing rain water surrounding these catch basins. No treatment processes, such as oil-water separators, were apparent to address stormwater at the site. WESTON is not aware of an NPDES permit addressing stormwater discharges or that these catch basins are connected to the oil-water separator near the maintenance garage.

Three transformers were observed at the site during the site reconnaissance. Two of these transformers were located inside the buildings (one in each) and one outside. The two interior transformers were self-standing/pad mounted types and were labeled as 2- and 3-phase transformers. Minor stains were observed on the concrete (main warehouse) and wood (garage) floors surrounding these transformers. The units were most likely installed by Provisioners sometime after the building's construction in 1988. A date of manufacture was not observed in any of the transformer labels. Federal regulations prohibited the use of PCBs in transformer oil in 1979. Based on the installation dates of these transformers, it is unlikely that they contain PCBs.

WESTON contacted the Puget Sound Energy (PSE) regarding PCB contents on the transformer observed along the site's west boundary during the reconnaissance. A response from PSE had not been received at the time for the submittal of this report. However, since federal regulations prohibited the use of PCBs in transformer oil in 1979, and based on the development of the property and the area in general in the mid 1980s, it is unlikely that it contains PCBs.

Asbestos containing building materials (ACBM) may be present on some of the site developments although no such items were specifically identified. A formal asbestos survey was not part of the scope of work for this ESA and therefore was not conducted at the site.

Aside from the maintenance garage, WESTON observed no additional stained soils, stressed vegetation, or additional evidence of soil or groundwater contamination during the site reconnaissance. Based on the conversations with the site owner, Ecology officials, and information regarding the environmental investigations conducted at the site, WESTON believes there is a potential for environmental liability from soil and/or groundwater conditions at the site. In addition, based on observation from housekeeping practices at the maintenance garage, the current status of both UST systems, and the results of the limited subsurface investigation, WESTON believes there is still a potential for environmental concern to the site from the chemicals still in storage at the site.

SECTION 4

SITE PRIOR USE

The following sections provide an overview of the findings of the historical research conducted for the site. This information was obtained by reviewing documents at the University of Washington Library, or as otherwise indicated.

A review of the site history was conducted using the following sources:

- Historical aerial photographs.
- Historical USGS topographic maps.
- Sanborn Fire Insurance Maps.
- Metsker's County Atlases.
- Polk City Street Directories.
- Discussion with facility owners.

The following information was obtained from this review.

4.1 AERIAL PHOTOS REVIEW

Historical aerial photographs were reviewed to acquire information concerning the history of the property. Available photographs from the years 1936, 1946, 1960, 1968, 1974, 1980, 1985, 1990, and 1995 were reviewed from Walker and Associates in Tukwila, Washington. The following is a summary of the review:

<u>1936, 1946, 1960, and 1968</u>

The site appeared to be undeveloped and farmed with row crops.

<u>1974, 1980, and 1985</u>

There appeared to be no more row crops in the 1974 photograph, however, the site remained undeveloped and covered with grasses and shrubs.

<u>1990, 1995</u>

The site appears to be developed with the same structures observed during the site visit. Numerous apparent semi trailers and cars were observed in the parking areas.

4.2 USGS TOPOGRAPHIC MAPS

United States Geological Survey (USGS) 15- and 7.5-minute Auburn Quadrangle topographic maps for the years 1949, with photo revisions in the 1968, 1973, 1983, and 1994 maps were reviewed at the University of Washington Map Collection section. The 1949, 1968, 1973, and 1983 maps depicted no structures or special land uses on the site. The 1994 map depicted two industrial size buildings as the only developments on the site. These buildings resemble the shape and size of the buildings observed during the site reconnaissance. There were no additional structures or special land uses depicted for the site on these maps.

4.3 METSKER'S COUNTY ATLASES

Metsker's County Atlases of King County for the years 1926 and 1936 were reviewed at the University of Washington Library Special Collections section. These atlases provide ownership information using township and range and plat subdivisions. The site appeared undeveloped and was labeled as owned by WMH Bogle (Trustee Orphan home *et al.*). No additional information regarding ownership or occupancy of the site was provided on these atlases.

4.4 KROLL'S COUNTY ATLASES AND KROLL MAP COMPANY ATLAS OF SEATTLE AUBURN-FEDERAL WAY SUPPLEMENT

Kroll's County Atlases of King County for the years 1958 and 1972 and Kroll Map Company Atlas of Seattle Auburn-Federal Way supplement for the years 1976 and 1987 were reviewed at the University of Washington Library Special Collections section. These atlases provide ownership information using township and range and plat subdivisions. The following is a summary of the information obtained from the review of these maps.

<u>1958</u>

The site appears to be undeveloped and labeled as part of "Jeff's Orphan Home". No additional information regarding ownership or occupancy of the site was provided on this atlas.

<u>1972, 1976</u>

The site appeared undeveloped and was labeled as owned by the National Bank of Commerce. No additional information regarding ownership or occupancy of the site was provided on this atlas.

<u>1987</u>

The site appears to be platted but undeveloped. An "ingress-egress and utility easement" was depicted along the south boundary of the site. No additional information regarding ownership or occupancy of the site was provided on this atlas.

4.5 R.L. POLK CITY STREET DIRECTORIES

R.L. Polk City Street Directories for the cities of Auburn and Kent for the years 1958, 1969, 1970, 1972, 1973, 1974, and 1975 were reviewed at the University of Washington Library Special

Collections section. City directories are useful to obtain historical occupancy information for a property listed by its address. The site was not indexed in any of the directories reviewed.

4.6 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps of the city of Auburn for the years 1894, 1899, 1904, 1910, and 1929 were reviewed at the University of Washington Library Newspaper and Microfiche section. Sanborn Fire Insurance Maps show details such as building uses and notes relating to hazardous materials storage. These maps are useful to obtain historical information on property uses. The site was not covered on any of the maps reviewed.

SECTION 5

ADJACENT PROPERTIES

5.1 CURRENT CONDITIONS

After completing the site visit, the adjacent properties, listed in Table 5-1, were observed from public rights-of-way or the site to identify possible areas of environmental concern, which may have affected the site:

Table 5-1—Adjacent Property Conditions and Assumed Activities

Location Relative to Site	Address	Owner or User	Assumed Activities (where observed)
North Adjacent property			vacant and undeveloped land
Northeast adjacent property	2302 West Valley Highway South	Bowman Distribution, Barnes, Atlas Van lines, Owens and Minor, Inc., Devries Moving, Packing, and Storage, Aim Aviation, Inc.	
East adjacent property	2002 West Valley Highway South	Henenknetch Tunneling Systems	
Southeast adjacent property		White River Park Wetland System	wetlands, undeveloped
South adjacent property	1820 West Valley Highway North	Composite Solutions	
Southwest adjacent properties	1402-1420 20th Street Northwest	Praxair, F.A. Aviation LTD, Ortlieb USA	
Southwest adjacent properties	1401-1419 20th Street Northwest	Cascade Metals Supply, others	
West adjacent property	2141 West Valley Highway	unidentified business	
Northwest adjacent property	2201 West Valley Highway	Leafs Deli, TCI, Surplus Tools, Ram Tools and Equipment Corporation	

With the exception of the north and southeast adjacent properties, which were undeveloped, all the adjacent properties were part of small- to medium-sized business parks with several occupants or large industrial facilities. WESTON observed no evidence of USTs, stressed vegetation, illegal dumping, drums, or evidence of groundwater or soil contamination at any of these properties from the site or public right-of ways surrounding these properties. Some pad-mounted transformers were observed in several of the adjacent properties. However, because of their size and distance, WESTON believes there is a low potential for environmental concern to the site from these units.

A drainage pond/ditch was observed on both sides of an access road between the site and the south adjacent property boundary, as illustrated in Figure 2-1. This drainage pond was full of water with marsh-like vegetation at the time of the site reconnaissance. The pond/ditch was observed running from this area through the southeast adjacent property identified as the White River Park Wetland System. The water from this drainage appeared to be clean and no stressed vegetation or other indications of adverse environmental impact was observed resulting from water runoff from the site or adjacent properties.

5.2 SITE VICINITY CONDITIONS

The site vicinity is part of several industrial and business parks in the outskirts of the city of Auburn, Washington. Industries observed in the site vicinity consist of aircraft parts and equipment manufacturers, moving and transportation companies, warehousing, tool and equipment manufacturers, food retail sales, and others. The topography of the site vicinity is relatively level and topographically upgrading areas to the site vicinity were located approximately 1/8th-mile to the west and were primarily residential in use.

5.3 ADJACENT PROPERTIES PRIOR USE

The following sections provide an overview of the findings of the historical research conducted for the adjacent properties. This information was obtained by reviewing documents at the University of Washington Library, or as otherwise indicated.

A review of the history of the adjacent properties was conducted using the following sources:

- Historical aerial photographs.
- Historical USGS topographic maps.
- Sanborn Fire Insurance Maps.
- Metsker's County Atlases.
- Kroll's County and City of Seattle Atlases.
- Polk City Street Directories.

The following information was obtained from this review.

5.3.1 Aerial Photograph Review

Historical aerial photographs were reviewed to acquire information concerning the history of the adjacent properties. Available photographs from the years 1936, 1946, 1960, 1968, 1974, 1980, 1985, 1990, and 1995 were reviewed from Walker and Associates in Tukwila, Washington. The following is a summary of the review:

1936, 1946, 1960, and 1968

All adjacent properties appeared to be undeveloped and farmed with row crops.

1974

There appeared to be no more row crops in adjacent properties in the 1974 photograph, however, these properties appeared to remain undeveloped and covered with grasses and shrubs.

1980

- The southwest, west, and northwest adjacent properties appeared to have been cleared of vegetation and being prepared for construction. A small shed-sized building and what appeared to be a semi trailer or logging truck were observed on the west adjacent property near the areas being cleared. No other vehicles or structures were observed in these properties.
- The remainder of the adjacent properties appeared to be in the same conditions observed in the 1974 photograph.

1985

- West Valley Highway north appears to have been upgraded to a 4-lane highway.
- 20th and 22nd Streets Northwest appeared to have been developed in the west and northwest adjacent properties.
- The south ½ of the west adjacent property (north of 20th Street and currently 1401 20th Street, Figure 2-1) appears to remain undeveloped. The north ½ (south of 22nd Street and currently 2141 West Valley Highway North, Figure 2-1) appears to have been developed with the same structures observed during the site reconnaissance.
- The northwest adjacent properties appeared to be in construction with a building similar in size and shape to the structure observed during the site reconnaissance.
- The remainder of the adjacent properties appeared to be essentially unchanged from the 1974 photograph.

1990

- The north ½ of the north adjacent property and the south adjacent property appeared to have been cleared. No structures or vehicles were observed on the north adjacent property, however, the south adjacent property appeared to be ready for development (bare soil).
- The southwest, and north ½ of the west adjacent properties appeared to be occupied by the same developments observed during the site visit.
- The remainder of the adjacent properties appeared to be essentially unchanged from the 1974 photograph.

1995

- All of the adjacent properties appeared to be occupied by the same developments observed during the site visit.

5.3.2 USGS Topographic Maps

United States Geological Survey (USGS) 15- and 7.5-minute Auburn Quadrangle topographic maps for the years 1949, with photo revisions in 1968, 1973, 1983, and the 1994 map were reviewed at the University of Washington Map Collection section. The 1949, 1968, 1973, and 1983 maps depicted no structures or special land uses on the adjacent properties. The 1994 map depicted several industrial-size buildings on the southwest, north ½ of the west, and northwest adjacent properties. These buildings resemble the shape and size of the buildings observed during the site reconnaissance. There were no additional structures or special land uses depicted for the remainder of the adjacent properties on these maps.

5.3.3 Metsker's County Atlases

Metsker's County Atlases of King County for the years 1926 and 1936 were reviewed at the University of Washington Library Special Collections section. These atlases provide ownership information using township and range and plat subdivisions. The following information for the adjacent properties was obtained from this review.

1926, 1936

The adjacent properties appeared undeveloped. The north, northeast, east, southeast and south adjacent properties were labeled as owned by WMH Bogle (Trustee Orphan home et al.). No additional information regarding ownership or occupancy of these properties was provided on these atlases.

The southwest, west, and northwest adjacent properties appeared to be undeveloped and labeled as owned by the Farmers Water Company of Auburn. No additional information regarding ownership or occupancy of these properties was provided on these atlases.

5.3.4 Kroll's County Atlases and Kroll Map Company Atlas of Seattle Auburn-Federal Way Supplement

Kroll's County Atlases of King County for the years 1958 and 1972 and Kroll Map Company Atlas of Seattle Auburn-Federal Way supplement for the years 1976 and 1987 were reviewed at the University of Washington Library Special Collections section. These atlases provide ownership information using township and range and plat subdivisions. The following is a summary of the information obtained from the review of these maps.

1958

All adjacent properties appeared to be undeveloped and labeled as part of "Jeff's Orphan Home". No additional information regarding ownership or occupancy of the site was provided on this atlas.

1972

All adjacent properties appeared to be undeveloped and labeled as owned by the National Bank of Commerce. No additional information regarding ownership or occupancy of the site was provided on this atlas.

1976

All adjacent properties appeared to be undeveloped and labeled as part of "Jeff's Orphan Home". No additional information regarding ownership or occupancy of the site was provided on this atlas.

1987

All adjacent properties appeared to be platted but undeveloped. An "ingress-egress and utility easement" was depicted along the south boundary of the site and the south adjacent property. The southwest adjacent property was labeled as part of the "Auburn Park of Industry Division II", the west adjacent property was labeled as the "Wilson's Addition", and the northwest adjacent property was labeled as part of the "Calhoun Industrial Park". No additional information regarding ownership or occupancy of the properties was provided on this atlas.

5.3.5 R.L. Polk's City Street Directories

R.L. Polk City Street Directories for the cities of Auburn and Kent for the years 1958, 1969, 1970, 1972, 1973, 1974, and 1975 were reviewed at the University of Washington Library Special Collections section. City directories are useful to obtain historical occupancy information for a property listed by its address. Adjacent properties were not indexed in any of the directories reviewed.

5.3.6 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps insurance maps of the city of Auburn for the years 1894, 1899, 1904, 1910, and 1929 were reviewed at the University of Washington Library Newspaper and Microfiche section. Sanborn Fire Insurance Maps show details such as building uses and notes relating to hazardous materials storage. These maps are useful to obtain historical information on property uses. The adjacent properties were not covered on any of the maps reviewed.

SECTION 6

ENVIRONMENTAL RECORDS REVIEW

6.1 REGULATORY LIST REVIEW

Review of regulatory agency lists was performed by VISTA Environmental Information (VISTA). A copy of the VISTA report is presented in Appendix B. VISTA reviewed the following agency lists:

- U.S. Environmental Protection Agency (EPA) National Priority List (NPL) (September, 1999);
- EPA Region X Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (August, 1999);
- EPA Resource Conservation and Recovery Information System (RCRIS) (August, 1999);
- EPA No Further Response Action (NFRAP) (August, 1999);
- EPA Corrective Action List (CORRACTS) (August, 1999);
- EPA Toxic Release Inventory System (TRIS) (January, 1998);
- EPA Emergency Response Notification System database (ERNS) (August, 1999).
- Washington State Department of Ecology (Ecology) Ecology Suspected Contaminated Sites Report (SCL) (November, 1998);
- Ecology Confirmed Contaminated Site Report (SPL) (November, 1998);
- Ecology Leaking Underground Storage Tank List (LUST) (July, 1999);
- Ecology Underground Storage Tank List (UST) (July, 1999);
- Ecology Municipal Solid Waste Facilities (SWLF) (September, 1998);
- Ecology Washington Site Register Toxic Cleanup Program, and
- United States Geological Survey (USGS) Groundwater Site Inventory (GWSI), (March, 1998).

VISTA searched the NPL, CORRACTS (for RCRA facilities under corrective action), and SPL lists for facilities located within a 1-mile radius of the site. A ½-mile radius was used for the CERCLIS, NFRAP, SCL, RCRA-TSD, LUST, SWLF, Washington Site Register, and GWSI lists. A ¼-mile radius was used for the RCRA-Violators-Enforcement (RCRIS), UST, and TRIS, lists. A 1/8-mile radius was used for the ERNS and RCRIS (for small and large quantity generators) lists.

The site was identified on the TRIS and UST databases. None of the adjacent properties were identified on any of the researched lists. The following information was obtained from the VISTA report.

6.1.1 NPL List

The NPL list identifies the facilities classified as Superfund facilities, which are eligible for federal cleanup assistance. There were no facilities located within 1-mile of the site identified on this list.

6.1.2 CORRACTS List

The CORRACTS list identifies RCRA facilities, which are undergoing corrective actions pursuant RCRA section 3008 h due to a release of hazardous waste or constituents to the environment. There was one facility located within ½-mile of the site identified on this list. WESTON believes there is a low potential of significant adverse environmental conditions at the site resulting from this facility. This conclusion is based on the distance between the facility and the site (0.35-miles southwest from the site), and the fact that the facility is located geologically and hydrologically downgradient from the site.

6.1.3 SPL List

The SPL list provides information on facilities that are subject to investigations concerning confirmed releases of hazardous substances. There were no facilities located within 1-mile of the site identified on the SPL list.

6.1.4 SCL List

The SCL list provides information on facilities that are subject to investigations concerning suspected releases of hazardous substances. There were no facilities located within ½-mile of the site identified on the SCL list.

6.1.5 CERCLIS/NFRAP Lists

The CERCLIS list identifies the facilities that are under review for inclusion in the Superfund program. There was one facility located within 1/2-mile of the site identified on this list. WESTON believes there is a low potential of significant adverse environmental conditions at the site resulting from this facility. This conclusion is based on the distance between the facility and the site (0.35-miles southwest from the site), and the fact that the facility is located geologically and hydrologically downgradient from the site.

6.1.6 RCRIS List

The RCRIS list identifies generators; transporters; and treatment, storage, and disposal (TSD) facilities of hazardous wastes, which are registered with the state. Facilities that generate less than 100-kilograms per month of non-acutely hazardous waste are conditionally exempt generators. Facilities that generate between 100-and 1,000-kilograms per month of non-acutely hazardous waste are small quantity generators. Facilities that generate at least 1,000-kilograms per month of non-acutely hazardous waste or 1-kilogram per month of acutely hazardous waste are large quantity generators.

There were no TSD facilities located within ½-mile of the site identified on this list. There was one RCRA violator located within ¼-mile of the site identified on this list. WESTON believes there is a low potential of significant adverse environmental conditions at the site resulting from this facility. This conclusion is based on the distance between the facility and the site (0.18-miles southwest from the site), and the fact that the facility is located geologically and hydrologically downgradient from the site.

There were two generators located within ½-mile from the site identified on this list. WESTON believes there is a low potential of significant adverse environmental conditions to the site resulting from these facilities. This conclusion is based on the distance between these facilities and the site (0.18-miles southwest and 0.38 north from the site), and the fact that these facilities are located geologically and hydrologically downgradient or crossgradient from the site.

6.1.7 LUST List

The LUST list presents limited information regarding facilities with reported releases from underground storage tanks. There were two facilities located within ½-mile of the site identified on this list. WESTON believes there is a low potential of significant adverse environmental conditions to the site resulting from these facilities. This conclusion is based on the distance between these facilities and the site (0.25-miles southwest and 0.38 north from the site), and the fact that these facilities are located geologically and hydrologically downgradient or crossgradient from the site.

6.1.8 SWLF List

The SWLF list identifies solid waste facilities. There were no facilities located within ½-mile of the site identified on this list.

6.1.9 Toxics/Washington State Site Register

The Washington Toxic Cleanup Program Site Register reports details of activities related to the study of hazardous waste sites under the Model Toxics Control Act (MTCA). The site was identified as having submitted to Ecology an interim report on 18 March 1999 for groundwater and soil contamination produced by an unspecified petroleum product. No additional information was provided in the VISTA report.

Two additional facilities located within ½-mile from the site were identified on the register. WESTON believes there is a low potential of significant adverse environmental conditions to the site resulting from these facilities. This conclusion is based on the distance between these facilities and the site (0.25-miles southwest and 0.38 north from the site), and the fact that these facilities are located geologically and hydrologically downgradient or crossgradient from the site.

6.1.10 TRIS

The TRIS list identifies facilities that report the use of toxic chemicals under Section 313 of the Emergency Planning and Community Right to Know Act also known as SARA Tittle III. There were no facilities located within ¼-mile from the site identified on this list.

6.1.11 UST List

The UST list identifies facilities, which have reported possession of underground storage tanks (UST). The site and one facility located 0.38-miles north from the site were identified on this list. Information provided in the VISTA report indicated the presence of the waste-oil and diesel USTs identified at the site during the site reconnaissance. Both USTs are listed as being of fiberglass reinforced plastic construction. The other facility is located approximately 0.38-miles north of the site and is geologically and hydrologically crossgradient from the site. Inclusion on this list does not indicate that UST releases have occurred. Facilities with reported releases from USTs should be present on the LUST list.

6.1.12 ERNS List

The ERNS list provides information on releases of oil and hazardous substances that have been reported to federal authorities. There were no facilities located within 1/8-mile of the site identified on this list.

WESTON believes the facilities identified on the lists present a low potential for significant adverse environmental conditions to the site. This conclusion is based on geologic and hydrologic conditions of the area, the downgradient or crossgradient hydrological location of these facilities to the site, and the distances of some of the facilities from the site.

6.2 SITE DOCUMENT REVIEW

Mr. Pollart provided several files with documents regarding the USTs and the waste-oil USTs excavation and cleanup. These documents include:

- Phase I ESA, Provisioners Terminal – Atlantic Geoscience, Inc. (AGI), September 1998,
- Summary of Data Collected to Date, letter, Environmental Management Resources (EMR), December 17, 1998,
- Proposal for Groundwater Characterization, EMR, December 17, 1999,
- Proposal for Preparing and Interim Remedial Action Report, EMR, January 8, 1999,
- Data Summary Report, EMR, January 14, 1999,
- Independent Remedial Action Report, EMR, March 1999,
- Results of Interim TPH Analysis, Groundwater Monitoring and Stream Sampling, Provisioners Express Facility, EMR, April 20, 1999, and
- Provisioners Express Groundwater Monitoring Report – September 1999, EMR, September 20, 1999.

Other documents reviewed included three tank tightness tests (March 1996, April 1997, and April 1998) for the diesel UST and lines, UST licenses, Ecology UST permits. There were no tightness test documentation provided for the waste-oil UST. Numerous records pertaining to pollution liability insurance for the site USTs, and attorney records were also provided by the facility owner. The following is a summary of the information obtained from these documents.

6.2.1 Phase I ESA—September 1998 (AGI 1998)

On September 1998, AGI conducted a Phase I ESA of the Provisioners property on behalf of a prospective buyer. The Phase I also included a limited subsurface investigation in which 5 soil borings were advanced in the vicinity of the diesel and waste-oil USTs in order to assess any potential releases from them. Three borings B-1 to B-3 were advanced in the vicinity of the diesel UST and oil-water separator, and two (B-4 and B-5 within the present excavation and already removed) in the vicinity of the waste-oil UST (Figure 2-2). Soil and groundwater samples collected from four of these borings were analyzed for hydrocarbon identification (WTPH-HCID) analyses. However, during drilling of soil boring B-4, free product (as oil) was encountered at approximately 6-feet below ground surface (bgs). Therefore, no soil or groundwater samples were collected from this boring. Analytical results from soil samples collected from the soil borings around the diesel UST and B-5 indicated no hydrocarbons were present in soils at these locations. However, all groundwater samples collected contained oil, gasoline, and diesel-range hydrocarbons above Washington's State Model Toxic Control Act (MTCA) Action levels for gasoline range, diesel range, and motor oil range organics (AGI 1998).

6.2.2 UST Closure Assessment—October/November 1998 (EMR 1998, 1999c)

In October 1998, EMR (owners' subcontractor) conducted UST closure assessment activities on the waste-oil UST. EMR indicated that it was evident that an unknown volume of free oil had drained into the soils and backfill surrounding the tank from a 4-inch drain-line sheared off approximately 2- 3-feet from the tank drain hole (EMR 1998). The drain-line was connected to two floor drains and sumps inside the maintenance garage. Approximately 350-cubic yards of contaminated soil were excavated and disposed of. EMR collected post excavation samples following the removal of the impacted soil. Analytical results of soil samples collected after the excavation of contaminated soils indicated that the bottom as well as the north, east, and west sidewalls of the excavation showed no detection of motor oil or diesel range hydrocarbons. The results indicated that contamination with motor oil range (660 mg/kg) and diesel range (2,200 mg/kg) hydrocarbons still persisted on the south sidewall of the excavation. A follow-up tracer dye test conducted on the drain line confirmed the drain line had leaked (EMR 1999c).

On 3 November 1998, EMR returned to the site to excavate a trench inside the building below both floor drains/sumps and along the drain line. EMR reported localized oil seeps at approximately 3- to 4-feet bgs on the trench sidewalls. After excavating the impacted soil, EMR collected 11 soil samples along the sidewalls and bottom of the completed excavation and analyzed them with the NWTPH-Dx method. Analytical results from these samples indicated that concentrations above the MTCA Method A Soil Cleanup Levels remained along the sidewalls of the trench and at least in one area of the trench bottom (EMR 1999c).

A push-probe investigation was also conducted at the end of November 1998 to delineate the extent of the oil seeps inside the garage. EMR's subcontractor advanced 16 push-probes from which ten subsurface soil samples were analyzed for oil and diesel range hydrocarbons by the

NWTPH-Dx method. Selected samples were also analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and gasoline range hydrocarbons by the NWTPH-G/BTEX methods. Analytical results of these soil samples indicated that concentrations above MTCA Method A Soil Cleanup Levels for oil, diesel, mineral spirits, and xylene remained beyond the extent of the excavation inside the maintenance garage.[2]

6.2.3 Groundwater Monitoring—December 1998-September 1999 (EMR 1999e)

In December 1998, EMR installed three groundwater monitoring wells (MW-1 through MW-3) at the site (Figure 2-2). EMR sampled the wells and analyzed the groundwater samples for oil and diesel range hydrocarbons using the NWTPH-Dx method. No concentrations of diesel or motor oil were detected from analytical results of groundwater samples collected from MW-1 and MW-3, however concentrations of 250 µg/L of gasoline range hydrocarbons and BTEX compounds were present at MW-2. Except for MW-2, none of the samples contained concentrations above MTCA Method A Cleanup Levels for TPH for groundwater (EMR 1999e). An additional groundwater monitoring well, MW-4 (Figure 2-2), was installed early in 1999.

In April 1999, based on recommendations by Ron Timm (Ecology), EMR conducted another round of groundwater sampling in addition to collecting a surface water sample from a ditch north of the UST excavation. All samples were analyzed for gasoline and diesel range hydrocarbons and BTEX and the surface water sample was also analyzed for diesel range hydrocarbons. Analytical results from these samples indicated no detectable concentrations of gasoline or BTEX were present in the surface water sample. Xylene was the only reported exceedance to MTCA Method A cleanup levels in groundwater at monitoring well MW-2 (EMR 1999e). The report also presented the results of five additional push-probes advanced at the site. The letter indicated that these probes were advanced in order to calculate interim TPH parameters in soil.

An EMR report for the fourth round of groundwater sampling conducted September 1999 at the site indicated that Benzene at MW-2 exceeded the MTCA Method A Groundwater Cleanup Level (EMR 1999e).

6.2.4 UST Permits and Tightness Tests

Among other documents reviewed, WESTON examined UST permits issued by the Department of Ecology for both USTs for the years 1991, 1992, 1993, and 1994. In addition WESTON examined tightness testing results for the diesel UST and lines for March 1996, April 1997, and April 1998. Results from all three tightness tests conducted on the diesel UST indicated both tank and lines were tight in all three occasions. Further, several documents reviewed indicated that Provisioners acquired UST liability insurance for both USTs since 1996 to April, 1999 and that tightness tests for the USTs were required by the policy. There were no tightness tests for the waste-oil UST in the documents provided.

[2] The *Independent Remedial Action Report* (EMR 1999d) also indicates exceedances of the Method A cleanup levels for mineral spirits/stodard solvents, which were present with concentrations up to 4000 mg/kg. However, MTCA Method A does not prescribe a cleanup level of these constituents.

6.3 ECOLOGY FILE REVIEW

Under the Freedom of Information Act (FOIA), WESTON requested to view regulatory agency records for the site and adjacent properties at Ecology Northwest Region Central Records facility in Bellevue, Washington. Central Records did not posses any records for the site even though the site is a confirmed LUST and is under Ecology's Voluntary Cleanup Program (VCP). The only other records provided by Ecology consisted of RCRA generator records for the south adjacent property, Composite Solutions. The documents consisted of a generator history status and facility data information sheet indicating that Composite Solutions is an aircraft parts and equipment manufacturer and that they have been a small quantity generator since 1995.

WESTON contacted Mr. Ron Timm, the Ecology official in charge of the site under the VCP. Mr. Timm confirmed the site is under the VCP program and the reason Central Records had not located any information was because the facility is still under review. Mr. Timm indicated that he had conducted a site visit and had reviewed reports regarding the waste-oil UST excavation. He stated that he talked to Mr. Pollart regarding the issue of a "No Further Action" letter for the site with a restrictive covenant stipulating that groundwater monitoring of the site wells would continue. Mr. Timm stated he had received several reports from Mr. Pollart's subcontractor, EMR, and that he was in the process of reviewing. Mr. Timm further indicated that he is waiting for Mr. Pollart to decide if he wants to re-install, up-grade, or abandon/remove the USTs before rendering a final decision on the site.

6.4 FIRE DEPARTMENT RECORDS

WESTON contacted the City of Auburn Fire Department for information regarding USTs or hazardous material incident records for the site. The Fire Department indicated that UST records and permits are kept by the City of Auburn Building Inspections and Permits Department. The Department also informed WESTON that their records for inspections, hazardous waste incidents, and violations are filed by date. Therefore, if a violation date is not available, records for a specific property cannot be located.

6.5 BUILDING DEPARTMENT RECORDS

WESTON contacted the City of Auburn Building Inspections and Permits Department for information regarding issued permit records and plans for the site. The Department requires a formal letter requesting to view the record stating purpose and intent on information usage. The Department also indicated that they require at least 10 business days to respond to such requests at which time an appointment will be scheduled. A formal request to the Department was faxed on 19 November 1999. A response from the Department was not received by the deadline for the submittal of this report. A letter report will be submitted to US West when the information becomes available to WESTON.

SECTION 7

LIMITED SUBSURFACE INVESTIGATION

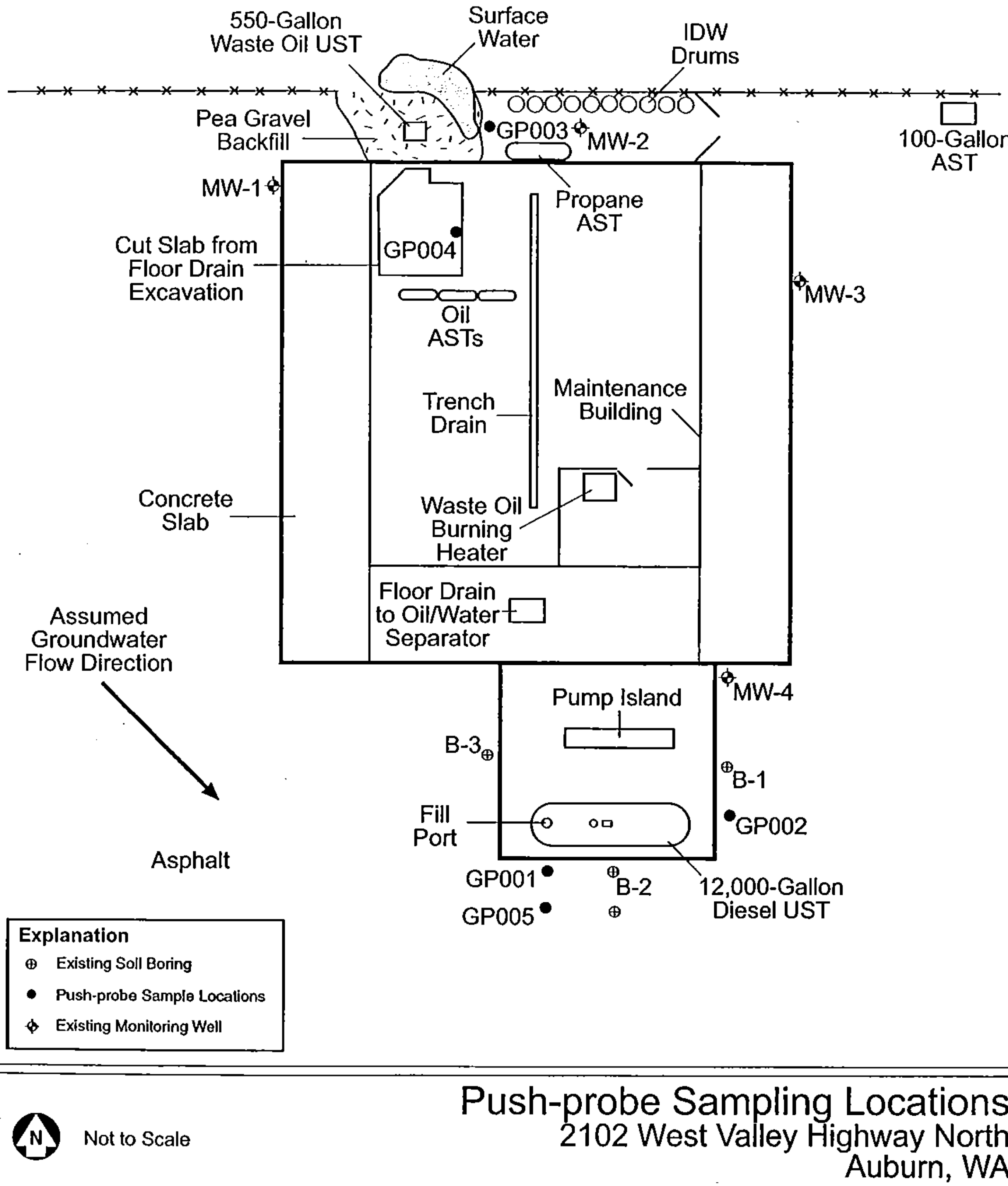
7.1 PUSH-PROBE SOIL SAMPLING

On 13 November, WESTON conducted a limited subsurface investigation in the vicinity of the waste-oil UST and the diesel UST. Soil samples were collected using push-probe technology at sampling locations GP001 through GP004 as shown in Figure 7-1. An additional soil sample was collected from GP005 based on field observations. Sample locations were selected in close proximity to the 12,000-gallon diesel UST, the 550-gallon waste oil UST and the location of the former floor drains inside the maintenance building. Samples were collected using a three-foot stainless steel split spoon sampler. The sampler and push probe rods were decontaminated with Alconox and tap water wash and rinsed with distilled water prior to collecting each sample. Soil samples were collected at continuous three-foot intervals to a depth of nine feet bgs. The samples were screened in the field based on visual staining and odor. One sample from each boring was selected for laboratory analysis based on the field screening results. Samples selected for laboratory analysis were submitted to Analytical Resources, Inc. (ARI) to be analyzed for total petroleum hydrocarbons in the diesel extended range (NWTPH-Dx), total petroleum hydrocarbons in the gasoline range (TPH-G), and volatile organic compounds (VOC). The sample collected from GP005 was only analyzed for NWTPH-Dx. All sample locations were backfilled with bentonite chips and completed with an asphalt cold patch as appropriate.

7.1.1 Field Observations

Both fill materials and native soils were observed during soil sampling. Fill materials were typically encountered to approximately 8.5 feet and consisted of tightly compacted, brown and gray, coarse grained sand and gravel. Beneath the fill, native soil was encountered as a thin layer of brown silt with high organic content approximately one foot thick. This brown silt layer was observed in GP003, GP004 and GP005. In GP004, gray fine and medium grained sand was encountered beneath the brown silt layer. GP004 was the only push-probe location advanced through the silt.

Pea gravel from the bed of the 12,000-gallon diesel UST was encountered at 2.5 feet bgs in GP001. As soil samples could not be collected from the pea gravel, a new location approximately ten feet to the South, GP005, was selected to complete the investigation at depth. A summary of the soil sampling investigation and field observations is contained in Table 7-1.



Push-probe Sampling Locations
2102 West Valley Highway North
Auburn, WA

WESTON MANAGERS DESIGNERS/CONSULTANTS

Figure
7-1

99-0450 Fig7-1.ai

Table 7-1—Field Observations During Soil Sampling

Location	Sample Interval (feet bgs)	Observations	Submitted for Lab Analysis[1]
GP001	0 to 3	Gray sand and gravel (Fill), tight, no stains or odors	X
	3 to 6	Pea gravel, water table at 4.5 feet, mild odor	
GP002	0 to 3	Sand and gravel (Fill), no stains or odors	
	3 to 6	Sand and gravel (Fill), water table at 4.5 ft bgs no stains or odors	X
	6 to 9	Sand and gravel with large cobbles, low recovery	
GP003	0 to 3	Sand and gravel (Fill), no stains or odors	
	3 to 6	Sand and large gravel (Fill), low recovery, no stains or odors. GW table not observed	
	6 to 9	Sand and gravel (Fill), dark brown silt with organics (Native) at 8.5 feet, no stains or odors	X
GP004	0 to 3	Cobbles, very low recovery	
	3 to 6	Brown and gray sand and gravel (Fill), tight, dry, no stains or odors	
	6 to 9	Sand and gravel (Fill), dark brown silt with organics (Native) at 7.5 feet, gray sand at 8.5 feet, no stains or odors	X
GP005	6 to 8	Gray sand and gravel (Fill), dark brown silt with organics (Native) at 7 feet. No stains or odors	Analyzed for TPH-Dx only

[1] Except where noted, analyses consisted of TPH-G, TPH-Dx, and VOCs.

7.2 PUSH-PROBE GROUNDWATER SAMPLING

Groundwater samples were collected using push-probe technology from GP001, GP002 and GP004. A groundwater sample was not collected from GP003 due to insufficient groundwater yield. Instead, a groundwater sample was collected from nearby monitoring well MW-2 using the methods described in Section 7.3.

Push-probe groundwater samples were collected through a four-foot screen using dedicated polyethylene tubing and a peristaltic pump. Groundwater at time of drilling was encountered between 4.5 and 5 feet bgs. The push-probe screen was advanced from 4 to 8 feet bgs to ensure capture of floating product, if any existed. Prior to sampling the groundwater was purged until turbidity reduced or the location was pumped dry. After waiting for recharge the location was sampled. Samples were submitted to ARI for NWTPH-Dx, TPH-G, and VOC analysis. Due to slow recharge, only a limited sample volume was collected from GP004. The sample from GP004 was submitted for TPH-G and VOC analysis. Samples to be analyzed for VOCs were collected with the peristaltic pump set at a very slow rate and with full tubing. The low groundwater yield of the compacted fill made collecting VOC samples with a stainless steel bailer impractical. No odors or sheens were detected during push-probe groundwater sampling.

7.3 MONITORING WELL GROUNDWATER SAMPLING

Monitoring well MW-2, located on the north side of the maintenance building as shown in Figure 7-1, was sampled in lieu of a push-probe groundwater sample from GP003. MW-2 has a total depth of 15 feet bgs and is screened from 5 to 15 feet bgs. MW-2 was purged and sampled with dedicated polyethylene tubing and a peristaltic pump. The well was purged for 15 minutes until approximately two well volumes had been purged. The purge water had a sheen and a mild petroleum odor. The sample collected from MW-2 was submitted to ARI for TPH-Dx, TPH-G, and VOC analysis.

Groundwater level measurements were collected from MW-1 through MW-4. Depth to groundwater was measured with a steel tape. Groundwater elevations were calculated based on top of casing elevations from EMR, Inc. (EMR 1999). A summary of groundwater elevations observed on 13 November 1999 is contained in Table 7-2.

Table 7-2—Groundwater Elevations on 13 November 1999

Well	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Screening Intervals (feet)
MW-1	100.51	4.42	96.09	5 - 15
MW-2	100.56	4.54	96.02	5 - 15
MW-3	100.50	4.75	95.75	5 - 15
MW-4	100.61	4.75	95.86	5 - 15

TOC – Top of Casing. Top of Casing elevations are measured relative to an arbitrary datum of 100 feet above sea level (EMR 1999e)

7.4 ANALYTICAL RESULTS

7.4.1 Soil Samples

Five soil samples were submitted to ARI for laboratory analysis. All samples submitted were analyzed for NWTPH-Dx, TPH-G, and VOC, except for the sample from GP005, which was only analyzed for NWTPH-Dx. Concentrations of detected analytes in soil samples are summarized in Table 7-3.

Table 7-3—Detected Analytes in Soil Samples from Provisioners Facility Phase II Investigation, 13 November 1999

Analyte	MTCA Method A Cleanup Level	MTCA Method B Cleanup Level[c]	Sample Location and Depth				
			GP001 (1 to 3' bgs)	GP002 (3 to 6' bgs)	GP003 (6 to 9' bgs)	GP004 (6 to 9' bgs)	GP005 (6 to 9' bgs)[b]
VOCs (µg/kg)							
2-Butanone		480	5.6 U	5.6 U	5.6 U	39	
Acetone		80	5.6 U	19	14	**150**	
Carbon Disulfide		80	1.1 U	1.1 U	1.1 U	1.3	
Methylene Chloride	500	0.58	3.3 U	**7.1**	**3.9**	**6.3**	
TPH (mg/kg)							
WTPH-Dx	200		98	13[a]	50[a]	160[a]	18[a]
WTPH-G	100		5.4 U	5.3 U	6.0 U	32	

Notes:

[a] TPH concentrations were not matched with a petroleum product except in GP001 (1 to 3' bgs), where the WTPH-Dx concentration of 98 mg/kg was identified as motor oil.

[b] The sample from GP005 (6 to 9' bgs) was only analyzed for WTPH-Dx.

[c] MTCA Method B standards shown are the most conservative of the carcinogen and non-carcinogen for Soil and Soil(100 X Groundwater) standards.

NWTPH-Dx

NWTPH-Dx was detected in all five samples submitted for analysis. Detected concentrations ranged from 13 mg/kg in GP002 at 3 feet bgs to 160 mg/kg in GP004 at 6 feet bgs. The hydrocarbon source in GP001 was identified as motor oil. None of the other samples had a chromatographic pattern matching that of diesel or motor oil. The MTCA Method A soil cleanup standard for diesel-range TPH is 200 mg/kg.

TPH-G

TPH-G was detected in one sample, GP004 at 6 feet bgs, at a concentration of 32 mg/kg. The detected gasoline-range petroleum hydrocarbons did not have a chromatogram that matched the pattern for fresh gasoline. However, the petroleum hydrocarbons appear to be severely weathered gasoline or other light petroleum products. The MTCA Method A soil cleanup level for gasoline range TPH-G is 100 mg/kg.

VOC

Four VOCs (2-butanone, acetone, carbon disulfide, and methylene chloride) were detected in one or more soil samples. The combination of VOCs detected may indicate the presence of carburetor cleaner as a source. However, acetone and methylene chloride are common laboratory contaminants, though they were not detected in the method blank. Of the VOCs detected only methylene chloride has a MTCA Method A soil cleanup standard. None of the samples had detected methylene chloride concentrations above the MTCA Method A soil cleanup standard of 500 µg/kg.

Concentrations of all VOCs detected in soil samples are contained in Table 7-3. 2-Butanone was detected in GP004 at 6 feet bgs at a concentration of 39 µg/kg. Acetone was detected in three samples at concentrations ranging from 14 µg/kg in GP003 at 6 feet bgs to 150 µg/kg in GP004 at 6 feet bgs. Carbon disulfide was detected in GP004 at 6 feet bgs at a concentration of 1.3 µg/kg. Methylene chloride was detected in three samples at concentrations ranging from 3.9 µg/kg in GP003 at 6 feet bgs to 7.1 µg/kg in GP002 at 3 feet bgs.

Acetone was detected above the MTCA Method B 100 X groundwater soil cleanup level of 80 mg/kg in GP004 at a concentration of 140 mg/kg. Methylene chloride was detected above the MTCA Method B 100 X groundwater carcinogen soil cleanup level of 0.58 mg/kg (actually for dichloromethane, same CAS number as methylene chloride) in GP002, GP003, and GP004. The MTCA Method B 100 X groundwater carcinogen soil cleanup level for dichloromethane (methylene chloride) is lower than the laboratory detection limit for GP001.

7.4.2 Groundwater Samples

Four groundwater samples were submitted to ARI for laboratory analysis. All samples submitted were analyzed for NWTPH-Dx, TPH-G, and VOC, except for the sample from GP004, which was only analyzed for TPH-G and VOC. Concentrations of detected analytes in groundwater samples are summarized in Table 7-4.

Table 7-4—Detected Analytes in Groundwater Samples from Provisioners Facility Phase II Investigation, 13 November 1999

Analyte	MTCA Method A Cleanup Level	MTCA Method B Cleanup Level[c]	Sample Location and Depth			
			GP001	GP002	MW-2	GP004
VOCs (µg/L)						
1,1-Dichloroethane		800	1.0 U	1.0 U	1.1	1.0 U
1,2,4-Trimethylbenzene			1.0 U	1.0 U	1.2	7
1,3,5-Trimethylbenzene			1.0 U	1.0 U	1.0 U	2.9
2-Butanone		4800	5.0 U	5.0 U	5.0 U	12
Acetone		800	5.0 U	19	5.0 U	32
Benzene	5	1.51	1.0 U	1.0 U	26	19
Chloroform		7.17	1.0 U	1.0 U	1.0 U	2.0
Ethylbenzene	30	800	1.0 U	1.0 U	1.0 U	2
m,p-Xylene	20	16000	1.0 U	1.0 U	1.0 U	4.5
n-Propylbenzene			1.0 U	1.0 U	1.0 U	1.0
o-Xylene	20	16000	1.0 U	1.0 U	1.0 U	2.8
Toluene	40	1600	1.0 U	1.0 U	1.0 U	3.9
TPH (mg/L)						
WTPH-Dx	1		2.2[b]	0.59[b]	0.73[b]	[a]
WTPH-G	1		0.25 U	0.25 U	0.44[b]	0.25 U

Notes:

[a] Due to limited sample volume WTPH-Dx was not performed on GP004.

[b] TPH concentrations were not matched with a petroleum product in any of the samples.

[c] MTCA Method B standards shown are the more conservative of the carcinogen and non-carcinogen groundwater standards.

NWTPH-Dx

NWTPH-Dx was detected in all three samples submitted for TPH-Dx analysis. Detected concentrations ranged from 0.59 mg/L in GP002 to 2.2 mg/kg in GP001. None of the other samples had a chromatographic pattern matching that of diesel or motor oil. The MTCA Method A groundwater cleanup level for TPH is 1 mg/L.

TPH-G

TPH-G was detected in one sample, MW-2, at a concentration of 0.44 mg/L. The detected gasoline-range petroleum hydrocarbons did not have a chromatogram that matched the pattern for fresh gasoline. However, the petroleum hydrocarbons appear to be severely weathered gasoline or other light petroleum products. The MTCA Method A groundwater cleanup level for TPH is 1 mg/L.

VOC

Twelve VOCs were detected in one or more groundwater samples. With the exception of a detection of acetone in GP002 all of the VOC detections occurred in MW-2 and GP004. Benzene was the only VOC detected at concentrations above the MTCA Method A groundwater cleanup levels. Benzene was detected at concentrations above the MTCA Method A standard (5 µg/L) in GP004 at 19 µg/L and in MW-2 at 26 µg/L.

Benzene was detected above the MTCA Method B groundwater cleanup level of 1.51 µg/L in MW-2 and GP004.

The combination of VOCs detected in GP004 may indicate the presence of carburetor cleaner, gasoline or petroleum based solvents. Benzene, toluene, ethylbenzene and m,p- and o- xylenes (BTEX) as well as seven other VOCs were detected in GP004. Concentrations of all detected VOCs are shown in Table 7-4.

SECTION 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

The results of this Pre-Lease investigation have identified several adverse environmental conditions associated with the site that pose a potential liability. These conditions include the past chemical management practices, releases and compliance of the underground storage tanks (USTs), and documented environmental impacts to soil and groundwater.

The evidence of current and past spills and presence of cracks on the site floors could represent a pathway for contaminants to reach soils and groundwater underneath the site. In addition, the fact that groundwater and subsurface soil show detected concentrations of BTEX and other VOC compounds unrelated to the waste-oil UST raises questions regarding additional source(s) in this area. These compounds are often identified as precursors of migration of gasoline compounds and can also be an indication of the presence of solvents in groundwater and soil. Based on this information, WESTON believes there is a significant environmental concern from the reported releases of petroleum hydrocarbons, VOCs, and BTEX compounds to soil and groundwater at the site's maintenance garage.

Aside from the maintenance garage, WESTON observed no additional stained soils, stressed vegetation, or additional evidence of soil or groundwater contamination during the site reconnaissance. In addition, WESTON believes there is a low potential for environmental concerns from transformers, solid waste receptacles, scrap metal, empty containers and other items observed throughout the site parking areas. However, WESTON believes there is a potential for environmental concern from the 55-gallon drums inside the trailer, the 100- to 200-gallon AST with a hose dispenser assembly, and the oil dispenser observed at the northeast area of the parking lot.

Based on the information obtained during this assessment, no recognized environmental liabilities were identified in connection with the adjacent properties.

Although most of the source of contamination (impacted soil) has been removed, there is still a significant amount of contaminated soil in place (EMR 1999d). WESTON understands that removal of this impacted soil is limited as its removal may affect the structural integrity of the building. In addition, the fact that groundwater and subsurface soil show detected concentrations of BTEX and other VOC compounds at GP-004 and MW-2 (which is crossgradient from the excavation), raises several questions regarding an additional source in this area. It should be noted that these compounds can be precursors of migration of gasoline compounds and an indication of the presence of solvents in groundwater and soil. Based on this information, WESTON believes there is a significant environmental concern from the reported release of waste oil, VOCs, and BTEX compounds to soil and groundwater at the site's maintenance garage.

8.2 RECOMMENDATIONS

WESTON recommends that that the following actions are taken by US West in regards to its lease of the property:

- The owner should remove and properly dispose all chemicals/petroleum products, parts, equipment, and vehicles. WESTON further recommends that copies of waste manifests of all chemical disposal be provided to US West to ensure compliant off-site disposal/treatment. In addition, the garage floor drain leading to the oil-water separator and the oil-water separator itself should be cleaned prior to US West occupying the site.
- US West should obtain full indemnification from the property owner for any environmental liability due to soil and groundwater contamination at the site. Please note, however, that such indemnification will not shield US West from liability by state and federal environmental regulators.
- US West should conduct a baseline environmental survey prior to occupying the facility. This survey should include substantial soil and groundwater sampling throughout the property to fully identify pre-lease environmental impacts.
- As soon as practical, the owner should furnish US West a "No Further Action Letter" from Ecology with a restrictive covenant to the owner to continue remedial and groundwater monitoring activities. Implementation of the monitoring program should remain in the responsibility of the owner with analytical data furnished to US West.
- The owner should continue to explore and implement remedial alternatives for the site as soon as possible to prevent further impact to groundwater from contaminated soils remaining at the site. The lease agreement should allow for US West's approval of any such implementation to ensure site operations are not detrimentally impacted.
- In the event that US West desires to use one or both UST system these should be upgraded to comply with current UST regulations or retrofitted to satisfy US West needs prior to US West signing a lease for the facility. If US West does not desire to operate one or both UST systems, the owner should remove or close in place the USTs in accordance to current regulations. In the event US West requires fuel storage on the facility, WESTON recommends that US West not utilize either of the existing tanks, but instead install separate tanks distant from these tanks.
- Strict accountability of all chemicals products should be maintained by US West throughout its leasehold interest in the property as a means to demonstrate full accountability.
- US West should obtain a copy of the site's National Pollutant Discharge Elimination System (NPDES) permit and attendant stormwater management plans. Future US West occupation and anticipated activities of the site will likely trigger permitting, Spill Prevention Control and Countermeasures Plan (SPCC) and/or Stormwater Pollution Prevention Plan preparation.

SECTION 9

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Attachment B
Boring Logs

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. **RE09929**

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* ______

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner **Estes West Express Facility**

Site Address **2102 W Valley Hwy N**

City **Auburn** County **King**

Consulting Firm **Environmental Partners, Inc.**

Unique Ecology Well ID Tag No. BID 369

Location 1/4 **NW** 1/4 **NW** Sec **12** TWN **21N** R **4E** [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

Tax Parcel No. **1221049034**

[X] Driller [ ] Trainee Name (Print) **Elijah Floyd**

Driller/Trainee Signature Eli Floyd

Driller/Trainee License No. **2842**

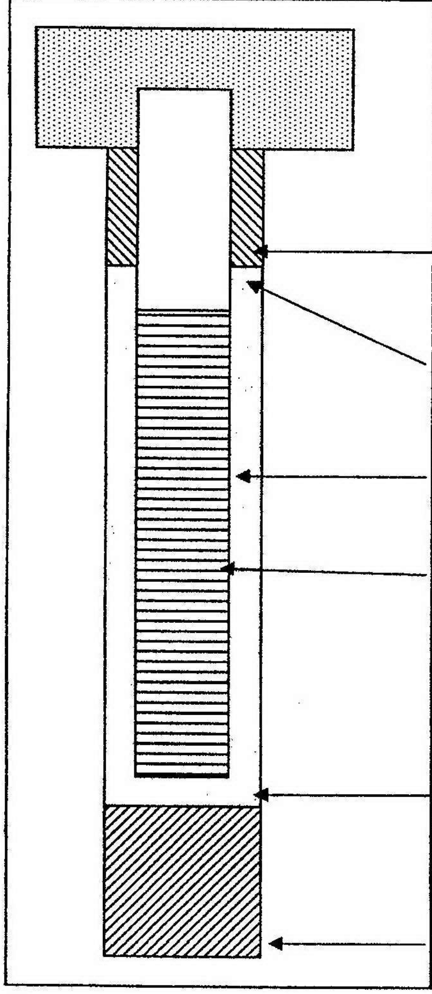
Cased or Uncased Diameter 3¼" Static Level 6'

If trainee, licensed driller's Signature and License No. ______

Work/Decommision Start Date 5-1-2014

Work/Decommision End Date 5-1-2014

Construction/Design Well Data 103-14-1189 Formation Description



Well Data		
Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	1" x 18½'	
Material	PVC	
Backfill	N/A	FT
Type	N/A	
Seal	15'	
Material	Bentonite chips	
Gravel Pack	3'	FT
Material	2/12 sand	
Screen (dia x dep)	1" x 18"	
Slot Size	N/A	
Material	PVC/Breathable	
Well Depth	20'	FT
Backfill	N/A	
Material	N/A	
Total Hole Depth	20'	FT

Formation Description

0 - 6' FT
4" Asphalt, small gravels silts, sands, Fine, med, brown, Dry, loose.

0 - 20 FT
sands 80%, silts, Fine Dark grey almost black, loose, wet.

0 - FT

RECEIVED
MAY 16 2014
DEPT OF ECOLOGY
NWRO - WR

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. **RE09929**

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number*

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: **Estes West Express Facility**

Site Address: **2102 W Valley Hwy N**

City: **Auburn** County: **King**

Consulting Firm: **Environmental Partners, Inc.**

Unique Ecology Well ID Tag No. BID 368

Location 1/4 **NW** 1/4 **NW** Sec **12** TWN **21N** R **4E** [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

Tax Parcel No. **1221049034**

[X] Driller [ ] Trainee Name (Print) **Elijah Floyd**

Driller/Trainee Signature Eli Floyd

Driller/Trainee License No. **2842**

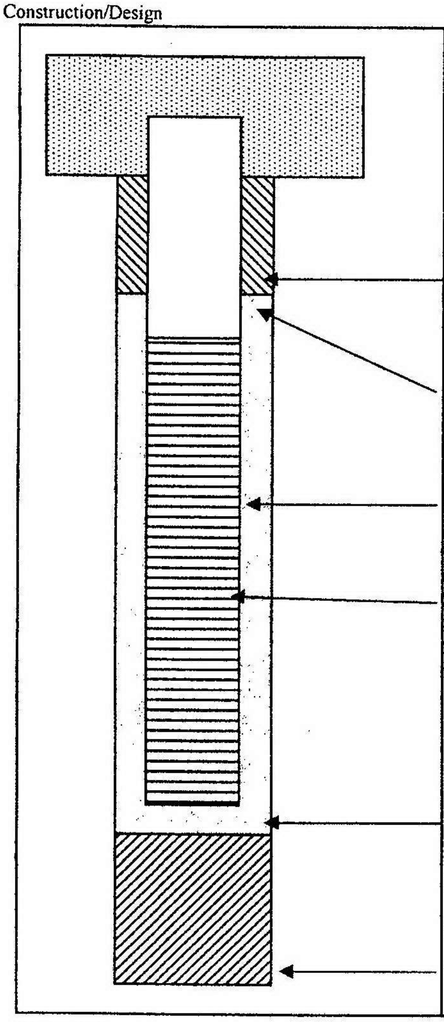
Cased or Uncased Diameter 3 1/4" Static Level 6'

Work/Decommision Start Date 5-1-2014

If trainee, licensed driller's Signature and License No.

Work/Decommission End Date 5-1-2014

Construction/Design



Well Data 103-14-1189

Well Data		
Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	1" x 18½'	
Material	PVC	
Backfill	N/A	FT
Type	N/A	
Seal	15'	
Material	Bentonite chips	
Gravel Pack	3'	FT
Material	2/12 sand	
Screen (dia x dep)	1" x 18"	
Slot Size	N/A	
Material	PVC/Breathable	
Well Depth	20'	FT
Backfill	N/A	
Material	N/A	
Total Hole Depth	20'	FT

Formation Description

0 - 6' FT
4" Asphalt, small gravels silts, sands, Fine, med, brown, Dry, loose.

0 - 20 FT
Sands 80%, silts, Fine Dark grey almost black, loose, wet.

0 - FT

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MAY 16 2014
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ECY 050-12 (Rec=v 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. **RE09929**

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* ______

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: **Estes West Express Facility**

Site Address: **2102 W Valley Hwy N**

City: **Auburn** County: **King**

Consulting Firm: **Environmental Partners, Inc.**

Unique Ecology Well ID Tag No.: BID 367

Location: 1/4 NW 1/4 NW Sec 12 TWN 21N R 4E [EWM] or WWM

Lat/Long (s,t,r still Required): Lat Deg x; Lat Min/Sec x; Long Deg x; Long Min/Sec x

Tax Parcel No.: 1221049034

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): **Elijah Floyd**

Driller/Trainee Signature: Eli Floyd

Driller/Trainee License No.: 2842

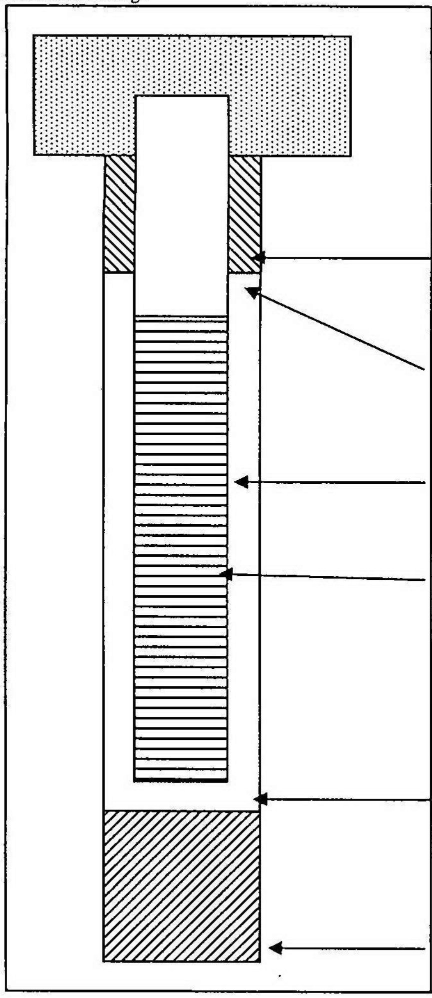
If trainee, licensed driller's Signature and License No. ______

Cased or Uncased Diameter: 3 1/4" Static Level: 6'

Work/Decommision Start Date: 5-1-2014

Work/Decommision End Date: 5-1-2014

Construction/Design — Well Data 103-14-1189 — Formation Description



Well Data		
Concrete Surface Seal Depth	2'	FT
Blank Casing (dia x dep)	1" x 18 1/2'	
Material	PVC	
Backfill	N/A	FT
Type	N/A	
Seal	15'	
Material	Bentonite chips	
Gravel Pack	3'	FT
Material	2/12 sand	
Screen (dia x dep)	1" x 18"	
Slot Size	N/A	
Material	PVC/Breathable	
Well Depth	20'	FT
Backfill	N/A	
Material	N/A	
Total Hole Depth	20'	FT

Formation Description

0 - 6' FT
4" Asphalt, small gravels silts, sands, Fine, med, brown, Dry, loose.

0 - 20 FT
sands 80%, silts, Fine Dark grey almost black, loose, wet.

0 - FT

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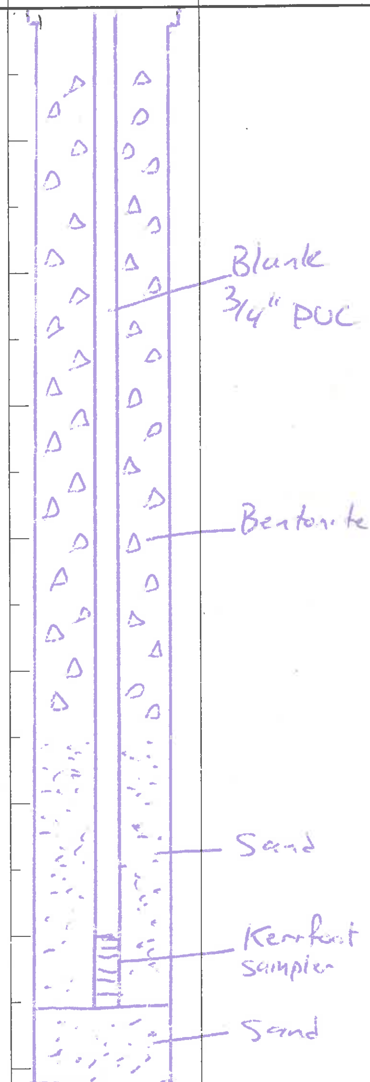
ENVIRONMENTAL PARTNERS INC (epi)

BORING ID: AI-6R

SITE ADDRESS: 2102 W Valley Hwy N Auburn WA	CLIENT: David Pollard	CASING MATERIAL AND SIZE: 3/4" Sch 40 PVC
DRILLING CONTRACTOR: Holocene Drilling	PROJECT #: 61901	SCREEN SIZE: Kerr Foot
DRILLING EQUIPMENT: D 50	DATE: 6/26/17	SCREEN INTERVAL: 1'
DRILLING METHOD: HSA	GROUND SURFACE ELEV. FT AMSL: NM	FILTER PACK: Silica Sand
LOGGED BY: J Sherrod	TOTAL DEPTH: 16'	FILTER PACK INTERVAL: ~~16'~~ 12'-16'

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Well Construction	Comments
		0-4" Concrete						
2	GP-GM	4"-5' Poorly-Graded gravel w/ silt and sand, brown, damp, mostly gravel w/ some silt and few sand.						
4		- moist						Blank 3/4" PVC
6		5'-16' Poorly-Graded sand w/ silt, wet, dk gray, mostly sand w/ few silt.						
8								Bentonite
10								
12								Sand
14								Kerr foot sampler
16		End of Borehole						Sand



NOTES: Hole drilled w/ wood plug, no samples collected.

HSA with well

ENVIRONMENTAL PARTNERS INC

BORING ID: BH-1

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**	
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**	
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	DECOMMISSIONING MATERIAL: **Bentonite**
LOGGED BY: **J. Sherrod**	TOTAL DEPTH: **15 ft**	BOREHOLE SIZE: **9 inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Comments
0		Asphalt and Gravel Sub-Base					
1	ML	SANDY SILT WITH GRAVEL; gray; damp-moist; very stiff; mostly silt with some sand and gravel; no odor					
5					BH-1-S-5	1	
			100	8,23,14			
6	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; very stiff; mostly sand with some silt; no odor					
6.5					Recon Water Sample BH-1-W-6.5	6.5	
7							Temporary PVC well screen installed for water sample 5-15 ft BGS
10					BH-1-S-10	0.2	
			100	4,11,12			
14			100	7,8,12			
15		End of Borehole			BH-1-S-15	0.7	
16							

NOTES: Backfilled with bentonite and patched with asphalt

EPI ENVIRONMENTAL PARTNERS INC

BORING ID: BH-2

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**

DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	DECOMMISSIONING MATERIAL: **Bentonite**
LOGGED BY: **J. Sherrod**	TOTAL DEPTH: **15 ft**	BOREHOLE SIZE: **9 inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Comments
0		Asphalt and Gravel Sub-Base					
1	ML	SANDY SILT WITH GRAVEL; gray; damp; very stiff; mostly silt with some sand and gravel; no odor					
5			50	8,16,10	BH-2-S-5	0.7	
6.8					Recon Water Sample BH-2-W-6.8		Temporary PVC well screen installed for water sample 5-15 ft BGS
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; very stiff; mostly sand with few silt; no odor		11,15,16	BH-2-S-10	0.4	
14				7,12,13			
15		End of Borehole			BH-2-S-15	0.2	
16							

NOTES: Backfilled with bentonite and patched with asphalt

490886

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. **RE08539**

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* ______

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: **Transit Warehouse**

Site Address: **2102 West Valley Hwy N**

City: **Auburn** County: **King**

Consulting Firm: **EPI**

Unique Ecology Well ID Tag No. BIC-497

Location 1/4 **NW** 1/4 **NW** Sec **12** TWN **21N** R **4E** [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

Tax Parcel No. **1221049034**

[X] Driller [ ] Trainee Name (Print) **Jeremiah Jenkins**

Driller/Trainee Signature [signature]

Driller/Trainee License No. **3114**

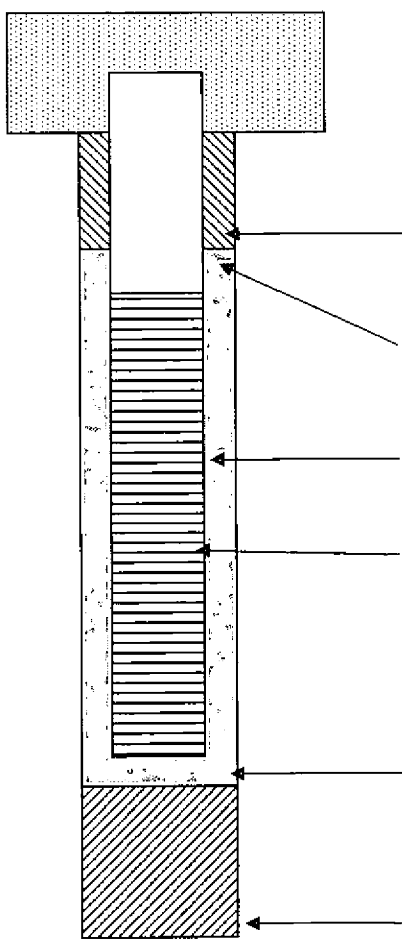
If trainee, licensed driller's Signature and License No. ______

Cased or Uncased Diameter 8" Static Level 7'

Work/Decommision Start Date 6-5-13

Work/Decommision End Date 6-5-13

Construction/Design



Well Data W3-285

Well Data	
Concrete Surface Seal Depth	0-2' FT
Blank Casing (dia x dep)	2" x 5
Material	PVC
Backfill	2' - 3' FT
Type	bent. chips
Seal	
Material	
Gravel Pack	3' - 15' FT
Material	2/12 sand
Screen (dia x dep)	2" x 10'
Slot Size	.010
Material	PVC
Well Depth	15' FT
Backfill	
Material	
Total Hole Depth	15' FT

Formation Description

0 - 5' FT
gravels & cobbles backfill material

0 5' - 10' FT
brown to black silty sands

0 10' - 15' FT
fine to medium fine black sands

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ECY 050-12 (Rev 2/01)

490887

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE08539

Construction/Decommission

[X] Construction
[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number*

Type of Well
[X] Resource Protection
[ ] Geotechnical Soil Boring

Property Owner: Transit Warehouse
Site Address: 2102 West Valley Hwy N
City: Auburn   County: King

Consulting Firm: EPI

Location: 1/4 NW 1/4 NW Sec 12 TWN 21N R 4E [EWM] or WWM

Unique Ecology Well ID Tag No. BIC-498

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.

Tax Parcel No. 1221049034

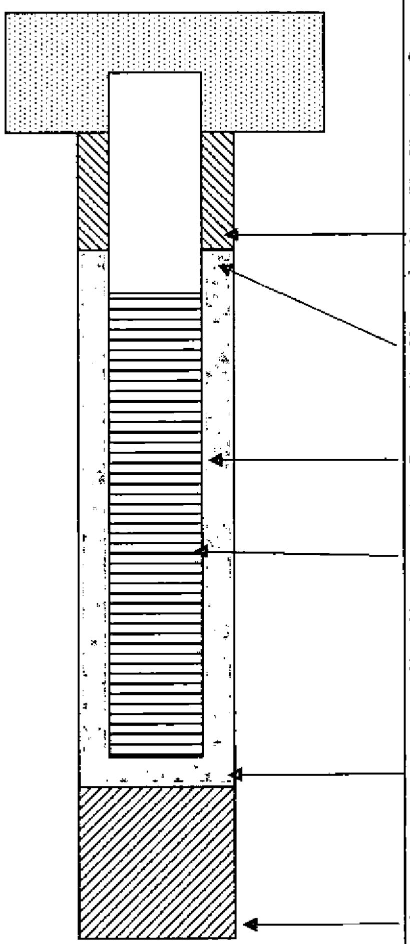
[X] Driller [ ] Trainee Name (Print) Jeremiah Jenkins
Driller/Trainee Signature
Driller/Trainee License No. 3114

Cased or Uncased Diameter 8"   Static Level 7'

If trainee, licensed driller's Signature and License No.

Work/Decommision Start Date 6-5-13
Work/Decommision End Date 6-5-13

Construction/Design   Well Data   W3-285   Formation Description



Well Data	
Concrete Surface Seal Depth	0-2' FT
Blank Casing (dia x dep)	2" x 5'
Material	PVC
Backfill	2-3' FT
Type	bent. chips
Seal	
Material	
Gravel Pack	3'-15' FT
Material	2/12 sand
Screen (dia x dep)	2" x 10'
Slot Size	.010
Material	PVC
Well Depth	15' FT
Backfill	
Material	
Total Hole Depth	15' FT

Formation Description:

0 - 5' FT
gravels & cobbles backfill material

5' - 10' FT
brown to black silty sands

10' - 15' FT
fine to medium fine black sands

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ECY 050-12 (Rev 2/01)

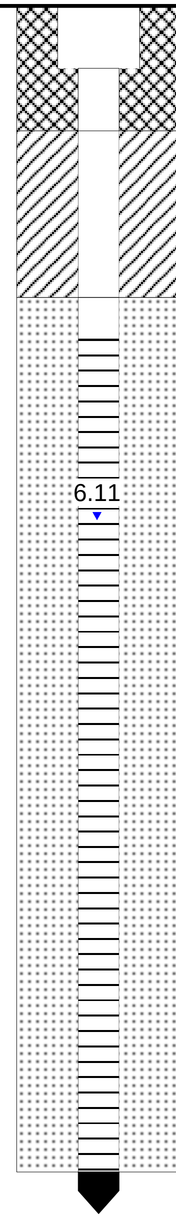
ENVIRONMENTAL PARTNERS INC

BORING ID: MW-7

SITE ADDRESS **2012 West Valley Highway North**		CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**		PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Mobile Drill B-59**		DATE: **8/26/16**	SCREEN INTERVAL: **4 - 14 ft BGS**
DRILLING METHOD: **HSA**		GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod**	BOREHOLE SIZE: **9 inch**	TOTAL DEPTH: **14 ft**	FILTER PACK INTERVAL: **3.5 - 14 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Asphalt and Gravel Sub-Base				
1	ML	SANDY SILT WITH GRAVEL; gray-brown; damp; hard; mostly silt with some sand and gravel; no odor				
3.5			60	8,17,19		0.4
5		Moist				
5.5	ML	SILT WITH SAND; dark gray; wet; stiff; mostly silt with some sand; no odor			MW-7-S-5.5	0.2
6			40	8,10,4		
9			100	1,5,4		0.1
11.5	SP-SM	POORLY-GRADED SAND WITH SILT; gray; wet; medium stiff; mostly sand with some silt				
13			100	4,3,4		
14		End of Borehole				
15						

Well Construction



NOTES: Ecology Well Tag ID: BJX 397

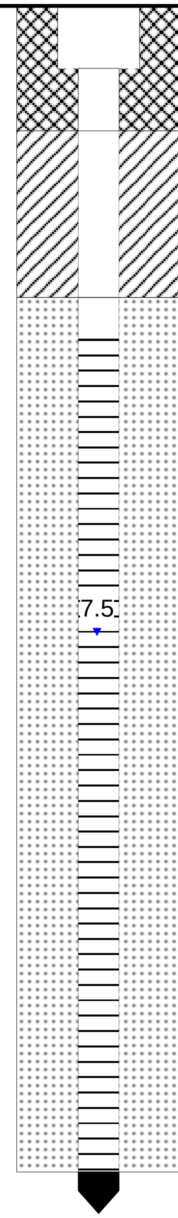
ENVIRONMENTAL PARTNERS INC

BORING ID: MW-8

SITE ADDRESS: **2012 West Valley Highway North**	CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**	SCREEN INTERVAL: **4 - 14 ft BGS**
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod** / BOREHOLE SIZE: **9 inch**	TOTAL DEPTH: **14 ft**	FILTER PACK INTERVAL: **3.5 - 14 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Asphalt and Gravel Sub-Base				
1.5	ML	SANDY SILT WITH GRAVEL; gray; damp-moist; hard; mostly silt with some sand; no odor				
3–4.5			40	11,18,19		0.4
5.2		Increasing gravel content; wet				
5.5					MW-8-S-5.5	0.3
5.5–6.5			30	10,6,1		
6.5	ML	SILT WITH SAND; gray; moist-wet; soft; mostly silt with some sand; no odor				
8.5–10			80	3,1,2		0.3
11.7		Increasing sand content; color change to dark brown/black; becomming stiffer with depth				
12.5–14			90	3,5,5		
14		End of Borehole				

Well Construction



NOTES: Ecology Well Tag ID: BJX 396

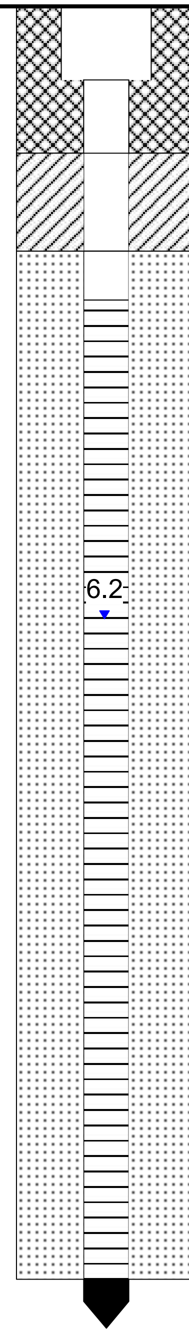
ENVIRONMENTAL PARTNERS INC

BORING ID: MW-9

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Limited Access Track Rig**	DATE: **8/11/17**	SCREEN INTERVAL: **3 - 13 ft BGS**
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod** / BOREHOLE SIZE: **9 inch**	TOTAL DEPTH: **13 ft**	FILTER PACK INTERVAL: **2.5 - 13 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Concrete Surface				
1	GP-GM	POORLY-GRADED GRAVEL WITH SILT AND SAND; brown; damp; loose; mostly gravel with some silt and few sand				
2						
3			30	5,5,5		0.0
4		-Moist, increasing silt content				
4.5			20	2,5,13		0.6
5.5					MW-9:5.5	446.0
6		-Moist, odor	50	10,13,15		
7						
8	ML	SILT WITH SAND; dark brown; wet; mostly silt with few sand; no odor				
9	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; mostly sand with some silt				7.3
10						
11						
12						
13		End of Borehole				42.1
14						

Well Construction



NOTES:

Attachment C
EPI Groundwater Monitoring Reports
(Electronic Files Only)

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

August 25, 2011

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express trucking facility located at 2102 West Valley Highway in Auburn, Washington (site). The general location of the site is shown on Figure 1.

Soil and ground water at the site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located on the north side of the existing truck maintenance building. 350 cubic yards of petroleum-impacted soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The monitoring wells have reportedly not been sampled since late 2002. The locations of the former UST and monitoring wells relative to the maintenance building are shown in Figure 2.

EPI understands that the site owner is seeking a No Further Action (NFA) determination for the site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in the wells to develop an appropriate strategy for achieving a full NFA determination for the site.

Background

The Washington State Department of Ecology (Ecology) issued a conditional NFA determination in January 2000. The NFA contains the condition that the quarterly ground water monitoring will be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year”. The NFA letter stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel and heavy oils”. Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the site owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels was confined to the area on the north side of the maintenance building around MW-2. At that time, samples from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A Cleanup Level of 800 μg/L; however, the benzene concentration exceeded its MTCA Method A Cleanup Level of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeded MTCA Method A Cleanup Levels.

Sampling was discontinued in late 2002 and the site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Cleanup Level in samples from MW-2. Records indicate that the site was subsequently dropped from the Voluntary Cleanup Program (VCP) due to inactivity.

Ground Water Sampling Procedures

On August 12, 2011, EPI sampled the four existing monitoring wells at the site.

The depth to water and total depths of all monitoring wells were measured using an electronic water level meter. To ensure reproducibility of the data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 93.88 feet in MW-1 to 93.63 feet in MW-4 confirming ground water flow from a generally northwest to southeast direction.

The monitoring wells were purged of a minimum of three casing volumes using single-use disposable bailers. Following field parameter stabilization the wells were sampled with a peristaltic pump using low-flow sampling techniques to minimize sample volatilization and silt uptake. Single-use disposable tubing was used in the wells, and ground water samples were pumped directly into appropriate pre-labeled sample containers at a flow rate of less than 100 milliliters per minute. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for analysis of:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method,
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx).

Immediately upon collection, filled ground water sample containers were placed in an iced cooler pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to ESN Northwest Chemistry Laboratory in Bellevue Washington.

Analytical Results

No GRPH, DRPH, HRPH, or BTEX compounds were detected in samples from any of the wells. The final laboratory analytical report and chain-of-custody form are included as Attachment A.

Conclusions:

- GRPH, DRPH, HRPH, or BTEX compounds were not detected in the sample from MW-2. The GRPH concentration decreased from 180 μg/L to not detected since the last sampling round in late 2002. The benzene concentration decreased from 12 μg/L to not detected during the same period. The decrease is likely due to natural attenuation of the petroleum contaminants following the source removal in 1998.

- Samples from the other three wells, MW-1, MW-3 and MW-4, continue to demonstrate no detectable concentrations of GRPH, DRPH, HRPH, or BTEX compounds.

- EPI recommends resumption of quarterly groundwater monitoring at the site. Ecology will require three additional rounds of ground water results at concentrations less than the MTCA Method A Cleanup Levels for GRPH, DRPH, HRPH, and BTEX compounds before considering of an unconditional NFA determination for the site. The next quarterly sampling round should be scheduled for mid-November 2011.

- EPI recommends re-application of the site to the VCP. EPI understands that the client has discussed the site recently with VCP personnel who assisted with preparation of the VCP application. This report will be forward to VCP personnel along with the completed and signed VCP application.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

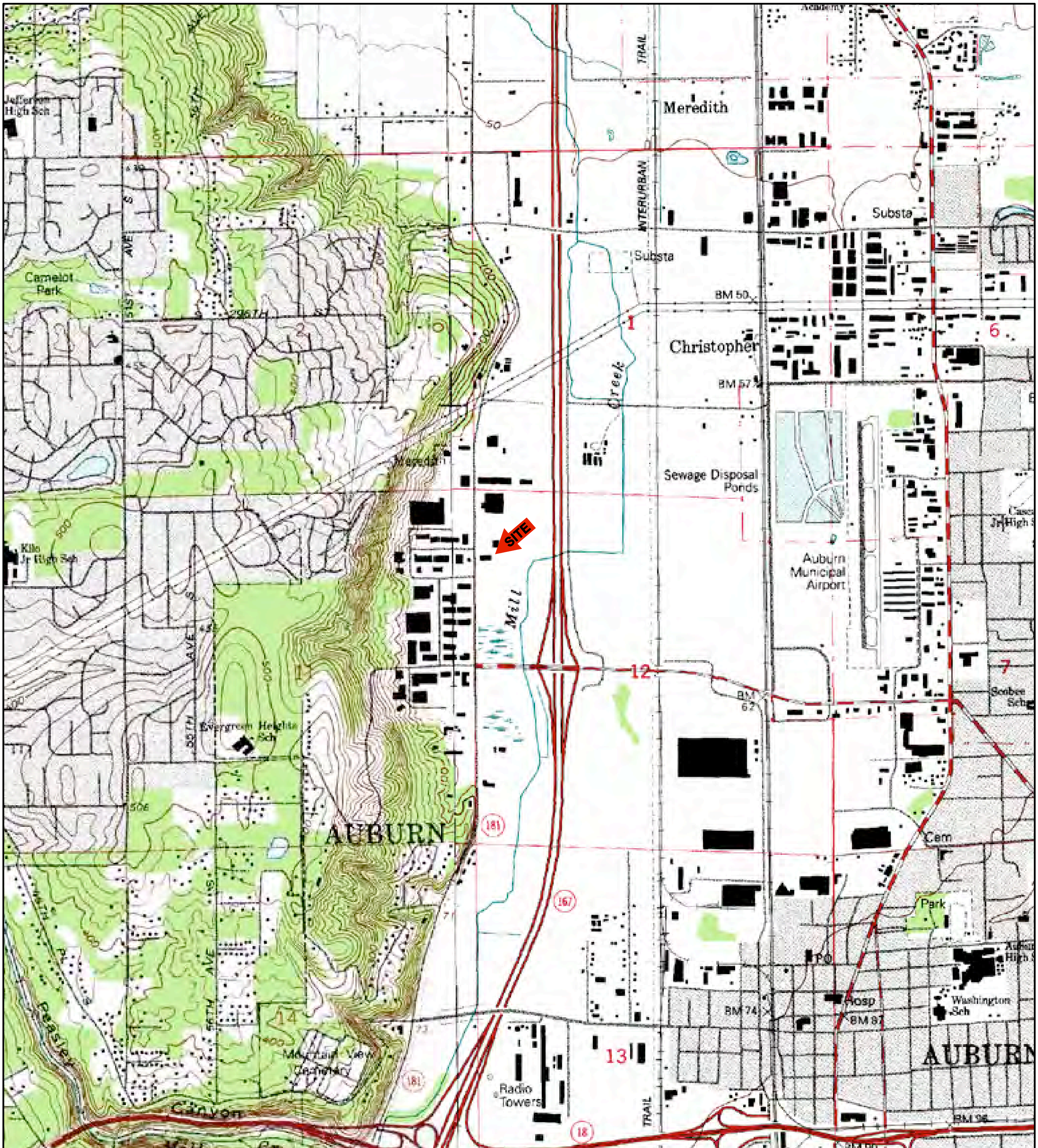
Sincerely,

State of Washington
674
Licensed Geologist
GREGORY A. McCORM...

Greg McCormick, L.G.
Senior Geologist

FIGURES
Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT
Attachment A – Analytical Laboratory Report



KEY:	**ENVIRONMENTAL PARTNERS INC**	**PROJECT**	61901.0		
SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)	*295 NE Gilman Boulevard, Suite 201* *Issaquah, Washington 98027*	**PREPARED FOR**	MR. DAVID POLLART		
POVERTY BAY, WA 1961; REVISED 1994	*FIGURE 1* GENERAL VICINITY MAP	**LOCATION**	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON		
AUBURN, WA 1949; REVISED 1994		**SHEET** 1 of 1	**DRAWN BY** ARM	**REVIEWED BY** GAM	**DATE** 08/24/11
SCALE = 1:24,000					

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

Attachment A

ESN NORTHWEST CHEMISTRY LABORATORY

Environmental Partners, Inc.
Estes Express PROJECT
Auburn, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	8/15/2011	8/15/2011	87%	nd	nd
MW-1	8/15/2011	8/15/2011	101%	nd	nd
MW-2	8/15/2011	8/15/2011	73%	nd	nd
MW-3	8/15/2011	8/15/2011	90%	nd	nd
MW-4	8/15/2011	8/15/2011	84%	nd	nd
Reporting Limits				250	500

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Environmental Partners, Inc.
Estes Express PROJECT
Auburn, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	8/17/2011	nd	nd	nd	nd	nd	89%
LCS	8/17/2011	93%	91%	89%	91%	97%	98%
LCSD	8/17/2011	75%	91%	80%	88%	---	133%
MW-1	8/17/2011	nd	nd	nd	nd	nd	89%
MW-2	8/17/2011	nd	nd	nd	nd	nd	95%
MW-3	8/17/2011	nd	nd	nd	nd	nd	100%
MW-4	8/17/2011	nd	nd	nd	nd	nd	107%
Reporting Limits		1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Environmental Partners Inc

ADDRESS: 295 NE Gilman Blvd Issaquah

PHONE: (425) 395-0026 FAX: (425) 395-0011

CLIENT PROJECT #: Pending PROJECT MANAGER: Greg Mc

DATE: 8/12/11 PAGE 1 OF 1

PROJECT NAME: Estes Express

LOCATION: Auburn, WA

COLLECTOR: GMC DATE OF COLLECTION 8/12/11

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH - DIESEL & OIL	TPH - GASOLINE	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos-PLM	GRO Suite	DRO Suite	WO Suite			NOTES	Total Number of Containers	Laboratory Note Number
1. MW-1	–	10:30	W			X	X	X																		
2. MW-2	–	2:30	W			X	X	X																		
3. MW-3	–	12:00	W			X	X	X																		
4. MW-4	–	12:15	W			X	X	X																		
5.																										
6.																										
7.																										
8.																										
9.																										
10.																										
11.																										
12.																										
13.																										
14.																										
15.																										
16.																										
17.																										
18.																										

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	8/12/11	[signature]	8/12/11 11:1[illegible]
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	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

November 28, 2011

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report - Second Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express trucking facility located at 2102 West Valley Highway in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located on the north side of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the maintenance building are shown in Figure 2.

EPI understands that the site owner is seeking a No Further Action (NFA) determination for the Site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in the wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

Background

The Washington State Department of Ecology (Ecology) issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that the quarterly ground water monitoring will be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year". The NFA letter stipulated that analytical results for ground water compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel and heavy oils". Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the site owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels was confined to the area on the north side of the maintenance building around MW-2. At that time, samples from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A Cleanup Level of 800 μg/L; however, the benzene concentration exceeded its MTCA Method A Cleanup Level of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A Cleanup Levels.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Cleanup Level in samples from MW-2. Records indicate that the Site was subsequently dropped from the Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned Facility Site ID # 91612121.

Ground Water Sampling Procedures

On November 11, 2011, EPI sampled the four existing monitoring wells at the Site.

The depth to water and total depths of all monitoring wells were measured using an electronic water level meter. To ensure reproducibility of the data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 94.58 feet in MW-1 to 94.35 feet in MW-4 confirming ground water flow from a generally northwest to southeast direction.

The monitoring wells were purged of a minimum of three casing volumes using single-use disposable bailers. Following field parameter stabilization the wells were sampled with a peristaltic pump using low-flow sampling techniques to minimize sample volatilization and silt uptake. Single-use disposable tubing was used in the wells, and ground water samples were pumped directly into appropriate pre-labeled sample containers at a flow rate of less than 100 milliliters per minute. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for analysis of:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method,
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed in an iced cooler pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

Analytical Results

No GRPH or BTEX compounds were detected in samples from any of the wells.

Monitoring well MW-1 had a DRPH concentration of 1,500 μg/L and a HRPH concentration of 300 μg/L. MW-2 had a DRPH concentration of 500 μg/L with no detectable concentrations of HRPH. MW-3 had a DRPH concentration of 65 μg/L with no detectable concentrations of HRPH. MW-4 had a DRPH concentration of 72 μg/L with no detectable concentrations of HRPH.

The final laboratory analytical report and chain-of-custody form are included as Attachment A.

Conclusions:

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, continue to demonstrate no detectable concentrations of GRPH or BTEX compounds.

- Concentrations of DRPH and HRPH were detected in MW-1 located near the northwest corner of the truck maintenance building. Concentrations of DRPH were also detected in MW-2, MW-3, and MW-4, however, none of these wells had detectable concentrations of HRPH. DRPH concentrations in MW-1 and MW-2 exceed the MTCA Method A Cleanup Level (CUL) for DRPH in ground water of 500 μg/L. The HRPH concentration in MW-1 does not exceed the Method A CUL for HRPH in ground water of 500 μg/L.

- EPI recommends continuation of the quarterly ground water monitoring program at the Site. Based on historical sampling information for the Site, DRPH has not been detected in MW-2, MW-3, or MW-4 since October 2000 and the current results appear to be anomalous. The next quarterly sampling round is scheduled for mid-March 2012. If DRPH is detected in the next round of sampling, fractionated analysis will be requested which will allow for calculation of a Method B CUL for each sample.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,

Greg McCormick, L.G.
Senior Geologist

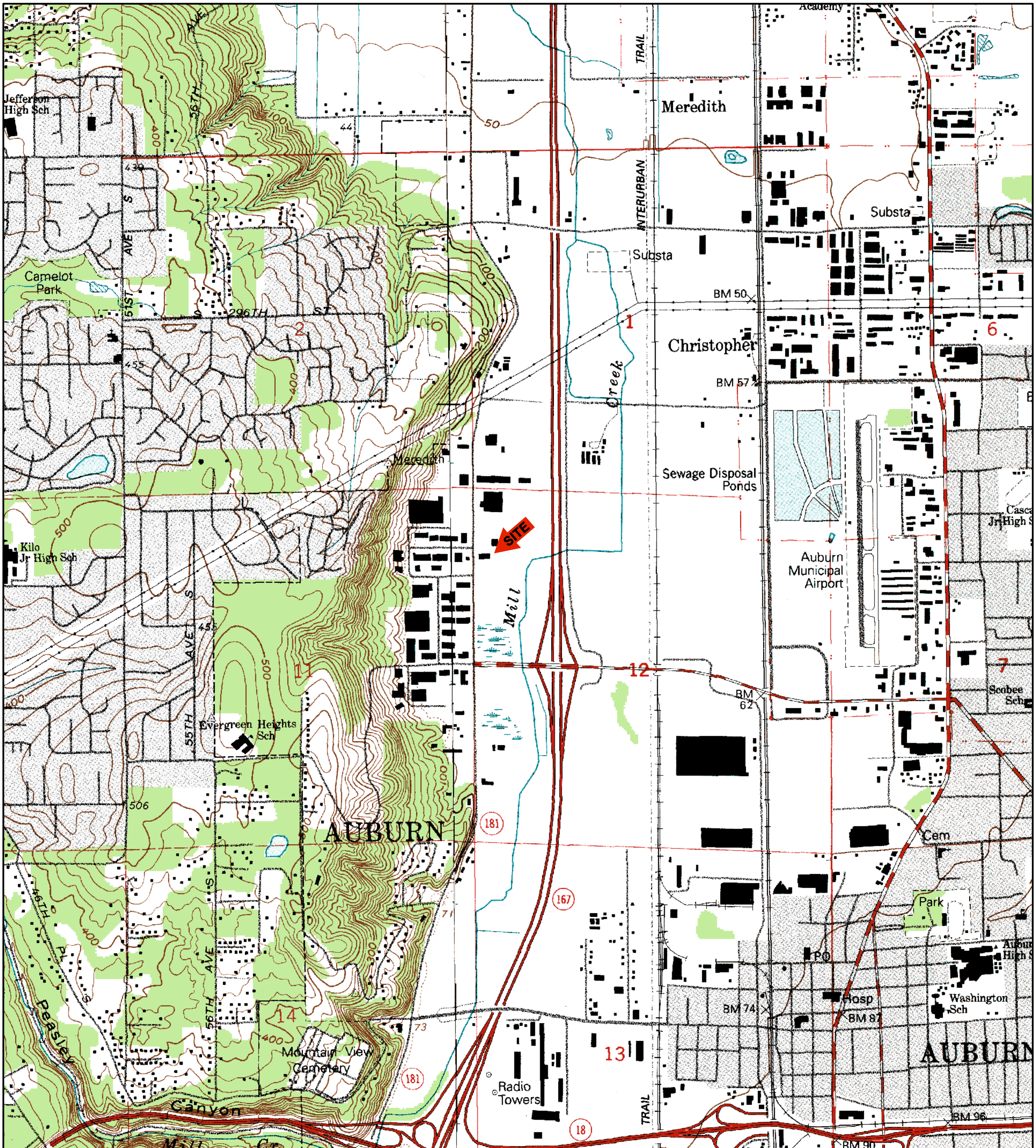
State of Washington
674
Licensed Geologist
GREGORY A. McCORMICK

FIGURES

Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT

Attachment A – Analytical Laboratory Report



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0		
PREPARED FOR	MR. DAVID POLLART		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

Attachment A

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 18, 2011

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes West Express, Auburn, WA, F&BI 111158

Dear Mr. McCormick:

Included are the results from the testing of material submitted on November 11, 2011 from the Estes West Express, Auburn, WA, F&BI 111158 project. There are 6 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
EPI1118R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 11, 2011 by Friedman & Bruya, Inc. from the Environmental Partners Estes West Express, Auburn, WA, F&BI 111158 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
111158-01	MW-1
111158-02	MW-2
111158-03	MW-3
111158-04	MW-4

All quality control requirements were acceptable.

Date of Report: 11/18/11
Date Received: 11/11/11
Project: Estes West Express, Auburn, WA, F&BI 111158
Date Extracted: 11/11/11
Date Analyzed: 11/12/11 and 11/14/11

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-1 111158-01	<1	<1	<1	<3	<100	100
MW-2 111158-02	<1	<1	<1	<3	<100	103
MW-3 111158-03	<1	<1	<1	<3	<100	101
MW-4 111158-04	<1	<1	<1	<3	<100	100
Method Blank 01-2056 MB	<1	<1	<1	<3	<100	104

Date of Report: 11/18/11
Date Received: 11/11/11
Project: Estes West Express, Auburn, WA, F&BI 111158
Date Extracted: 11/15/11
Date Analyzed: 11/15/11 and 11/16/11

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-1 111158-01	1,500 x	300 x	98
MW-2 111158-02	500 x	<250	106
MW-3 111158-03	65 x	<250	86
MW-4 111158-04	72 x	<250	102
Method Blank 01-2071 MB	<50	<250	93

Date of Report: 11/18/11
Date Received: 11/11/11
Project: Estes West Express, Auburn, WA, F&BI 111158

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

Laboratory Code: 111145-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	91	72-119
Toluene	ug/L (ppb)	50	93	71-113
Ethylbenzene	ug/L (ppb)	50	93	72-114
Xylenes	ug/L (ppb)	150	89	72-113
Gasoline	ug/L (ppb)	1,000	99	70-119

Date of Report: 11/18/11
Date Received: 11/11/11
Project: Estes West Express, Auburn, WA, F&BI 111158

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	87	99	58-134	13

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

111158

SAMPLE CHAIN OF CUSTODY

ME 11-11-11 A04 / V1

Send Report To Greg McCormick

Company Environmental Partners

Address 295 NE Gilman Blvd

City, State, ZIP Issaquah, WA

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Estes West Express Auburn, WA

PO #

REMARKS

Page # 1 of 1

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID		Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS					Lab ID	Notes
MW-1	GMC	~~10:55~~	11/11/11	10:55	W	4	X	X	X								01A-D	
MW-2	GMC	~~11:30~~		11:30	W	4	X	X	X								02	
MW-3	GMC	~~12:50~~		12:50	W	4	X	X	X								03	
MW-4	GMC	~~12:10~~		12:10	W	4	X	X	X								04	

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: [signature]	Greg McCormick	EPI	11/11/11	2:45
Received by: [signature]	VINH	FBI	11/11/11	2:45
Relinquished by:				
Received by:				

Samples received at 4 °C

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

March 1, 2012

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report – Third Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express trucking facility located at 2102 West Valley Highway in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the maintenance building are shown in Figure 2.

EPI understands that the site owner is seeking a No Further Action (NFA) determination for the Site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in the wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

Background

The Washington State Department of Ecology (Ecology) issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that quarterly ground water monitoring and reporting will continue until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year”. The NFA letter stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel and heavy oils”. Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the site owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels was confined to the area on the north side of the maintenance building around MW-2. At that time, samples from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A Cleanup Level of 800 μg/L; however, the benzene concentration exceeded its MTCA Method A Cleanup Level of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A Cleanup Levels.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Ground Water Cleanup Level in samples from MW-2. Records indicate that the Site was subsequently dropped from the Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned Facility Site ID # 91612121.

Ground Water Sampling Procedures

On February 10, 2012, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

The depth to water and total depths of all monitoring wells were measured using an electronic water level meter. To ensure reproducibility of the data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 95.24 feet in MW-1 to 94.80 feet in MW-4 confirming ground water flow generally from a northwest to southeast direction.

The monitoring wells were purged of a minimum of two casing volumes using single-use disposable bailers. The wells were purged dry and allowed to recharge for approximately one hour prior to sampling. The wells were sampled with a peristaltic pump using low-flow sampling techniques to minimize sample volatilization and silt uptake. Single-use disposable tubing was used in the wells, and ground water samples were pumped directly into appropriate pre-labeled sample containers at a flow rate of less than 100 milliliters per minute. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for analysis of:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method,
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed in an iced cooler pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

Analytical Results

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water Cleanup Levels (CULs).

- No GRPH, BTEX, or HRPH compounds were detected in samples collected from any of the wells.

- Monitoring well MW-1 had a DRPH concentration of 690 µg/L with no detectable HRPH concentration. The DRPH concentration is greater than the MTCA Method A Ground Water CUL of 500 µg/L but has decreased from 1,500 µg/L in the November 2011 sampling round.

- MW-2 had no detectable concentrations of DRPH. The DRPH concentration has decreased from 500 µg/L in the November 2011 sampling round.

- MW-3 had a DRPH concentration of 100 µg/L and has increased from 65 µg/L in the November 2011 sampling round.

- MW-4 had a DRPH concentration of 150 µg/L and has increased from 72 µg/L in November 2011 sampling round.

Conclusions

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, continue to demonstrate no detectable concentrations of GRPH or BTEX compounds for three consecutive quarters of sampling.

- HRPH was not detected in samples from any of the wells.

- DRPH was detected at a concentration greater than the MTCA Ground Water Cleanup Level in the sample from MW-1, which is located near the northwest corner of the truck maintenance building. Concentrations of DRPH were also detected in samples from MW-3 and MW-4, however, neither concentration exceeded the Method A Ground Water CUL for DRPH in ground water of 500 *µ*g/L.

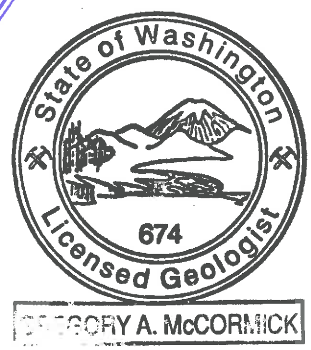
- EPI recommends continuing the quarterly ground water monitoring program at the Site. Based on historical sampling information for the Site, DRPH had not been detected in MW-2 since October 2000. Detections of DRPH in the both the November 2011 and February 2012 sampling rounds suggests possible residual impacts from the former waste oil UST at the northwest corner of the maintenance building.

- The next quarterly sampling round is scheduled for mid-May 2012.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

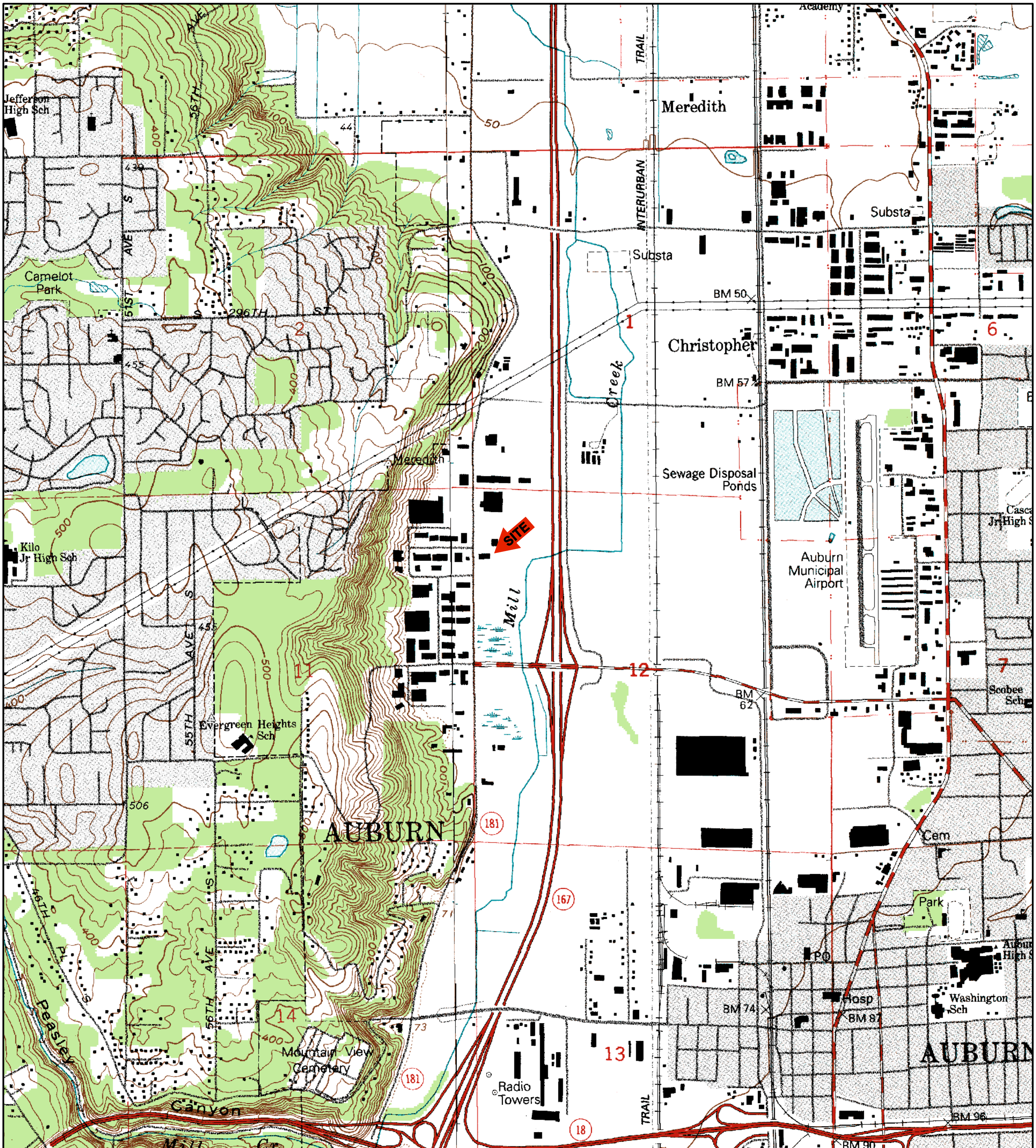
Sincerely,

Greg McCormick, L.G.
Senior Geologist



FIGURES
Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT
Attachment A – Analytical Laboratory Report



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

Attachment A

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 20, 2012

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes West Express Auburn, WA, PO 61901.0

Dear Mr. McCormick:

Included are the results from the testing of material submitted on February 10, 2012 from the Estes West Express Auburn, WA, PO 61901.0, F&BI 202123 project. There are 6 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
EPI0220R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 10, 2012 by Friedman & Bruya, Inc. from the Environmental Partners Estes West Express Auburn, WA, PO 61901.0, F&BI 202123 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
202123 -01	MW-1
202123 -02	MW-2
202123 -03	MW-3
202123 -04	MW-4

All quality control requirements were acceptable.

Date of Report: 02/20/12
Date Received: 02/10/12
Project: Estes West Express Auburn, WA, PO 61901.0, F&BI 202123
Date Extracted: 02/13/12
Date Analyzed: 02/13/12

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-1 202123-01	<1	<1	<1	<3	<100	88
MW-2 202123-02	<1	<1	<1	<3	<100	89
MW-3 202123-03	<1	<1	<1	<3	<100	90
MW-4 202123-04	<1	<1	<1	<3	<100	90
Method Blank 02-0240 MB	<1	<1	<1	<3	<100	89

Date of Report: 02/20/12
Date Received: 02/10/12
Project: Estes West Express Auburn, WA, PO 61901.0, F&BI 202123
Date Extracted: 02/15/12
Date Analyzed: 02/16/12

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 50-150)
MW-1 202123-01	690 x	<250	94
MW-2 202123-02	<50	<250	90
MW-3 202123-03	100 x	<250	95
MW-4 202123-04	150 x	<250	99
Method Blank 02-250 MB2	<50	<250	96

Date of Report: 02/20/12
Date Received: 02/10/12
Project: Estes West Express Auburn, WA, PO 61901.0, F&BI 202123

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

Laboratory Code: 202124-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	84	65-118
Toluene	ug/L (ppb)	50	88	72-122
Ethylbenzene	ug/L (ppb)	50	91	73-126
Xylenes	ug/L (ppb)	150	89	74-118
Gasoline	ug/L (ppb)	1,000	105	69-134

Date of Report: 02/20/12
Date Received: 02/10/12
Project: Estes West Express Auburn, WA, PO 61901.0, F&BI 202123

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	91	88	58-134	3

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

202123

SAMPLE CHAIN OF CUSTODY

ME 02-10-12 A04 / V1

Page # 1 of 1

Send Report To Greg McCormick

Company Environmental Partners

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah, WA

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Estes West Express Auburn, WA

PO#

REMARKS Project No. 61901.0

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
MW-1	01 A-D	2/10/12	1300	W	4	X	X	X									
MW-2	02	↓	1320	W	4	X	X	X									
MW-3	03		1340	W	4	X	X	X									
MW-4	04		1355	W	4	X	X	X									

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Greg McCormick	EPI	2/10/12	
Received by: [signature]	A. PODNOZOVA	FBI	2/10/12	3:25PM
Relinquished by:				
Received by:		Samples received at 5 °C		

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

June 8, 2012

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report – Fourth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express trucking facility located at 2102 West Valley Highway in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown in Figure 2.

EPI understands that the property owner is seeking a No Further Action (NFA) determination for the Site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in the wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

Background

The Washington State Department of Ecology (Ecology) issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that quarterly ground water monitoring and reporting will continue until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year”. The NFA letter stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils”. Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the property owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels (CULs) was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, samples from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A CUL of 800 μg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Ground Water Cleanup Level in samples from MW-2. Records indicate that the Site was subsequently dropped from the Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned Facility Site ID #91612121. Quarterly sampling of the four on-site wells resumed in August 2011. On March 26, 2012 Ecology notified the property owner that the January 2000 conditional NFA determination was rescinded since the benzene concentrations in groundwater from well MW-2 remained above MTCA CULs and the previous remedial remedy did not appear to have been effective at achieving the applicable cleanup level.

Ground Water Sampling Procedures

On May 17, 2012, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility of the data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 95.16 feet in MW-1 to 94.90 feet in MW-3 indicating ground water flow generally from a west to east direction. Previous groundwater flow directions were generally northwest to southeast.

Prior to sampling EPI purged the monitoring wells a minimum of two casing volumes of water using single-use disposable bailers. The wells were purged dry and allowed to recharge for approximately one hour prior to sampling. The wells were sampled with a peristaltic pump using low-flow sampling techniques to minimize sample volatilization and silt uptake. Single-use disposable tubing was used in the wells, and ground water samples were pumped directly into appropriate pre-labeled sample containers at a flow rate of less than 100 milliliters per minute. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for analysis of:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method,
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

Analytical Results

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water CULs.

- GRPH and BTEX compounds were not detected in samples collected from any of the wells.
- The sample from monitoring well MW-1 had a DRPH concentration of 1,100 μg/L with an HRPH concentration of 480 μg/L. The DRPH concentration exceeds the MTCA Method A Ground Water CUL of 500 μg/L but has decreased from the 1,500 μg/L concentration recorded in the November 2011 sampling round. The HRPH concentration of 480 μg/L does not exceed its MTCA Method A Ground Water CUL of 500 μg/L.
- The sample from MW-2 had no detectable concentrations of DRPH. The DRPH concentration has decreased from 500 μg/L detected in the November 2011 sampling round.
- The sample from MW-3 had a DRPH concentration of 53 μg/L and has decreased from 100 μg/L detected in the February 2012 sampling round.
- The sample from MW-4 had a DRPH concentration of 160 μg/L. The concentration of DRPH in samples from MW-4 has increased in each of the previous sampling rounds since August 2011.

Conclusions

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, continue to demonstrate no detectable concentrations of GRPH or BTEX compounds for the last four consecutive quarters of sampling.

- HRPH was detected at a concentration of 480 µg/L in the sample from monitoring well MW-1, located near the northwest corner of the truck maintenance building. HRPH was not detected in samples from any of the other wells.

- DRPH was detected at a concentration of 1,100 µg/L in the sample from monitoring well MW-1, which exceeds the MTCA Ground Water Cleanup Level of 500 µg/L. The DRPH concentration in MW-1 has exceeded the Method A CUL for the past three quarterly sampling rounds and has increased from 690 µg/L in February 2012. Concentrations of DRPH were also detected in samples from MW-3 and MW-4; however, neither concentration exceeded the Method A Ground Water CUL for DRPH in ground water of 500 µg/L.

EPI recommends continuing the quarterly ground water monitoring program at the Site. Based on historical sampling information for the Site, DRPH had not been detected in MW-2 since October 2000. Detections of DRPH in the past three sampling rounds potentially indicate residual impacts from the former waste oil UST at the northwest corner of the truck maintenance building.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,

Greg McCormick, L.G.
Senior Geologist

State of Washington
674
Licensed Geologist
GREGORY A. McCORMICK

TABLE

Table 1 – Summary of Ground Water Sample Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

FIGURES

Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT

Attachment A – Analytical Laboratory Report

Table

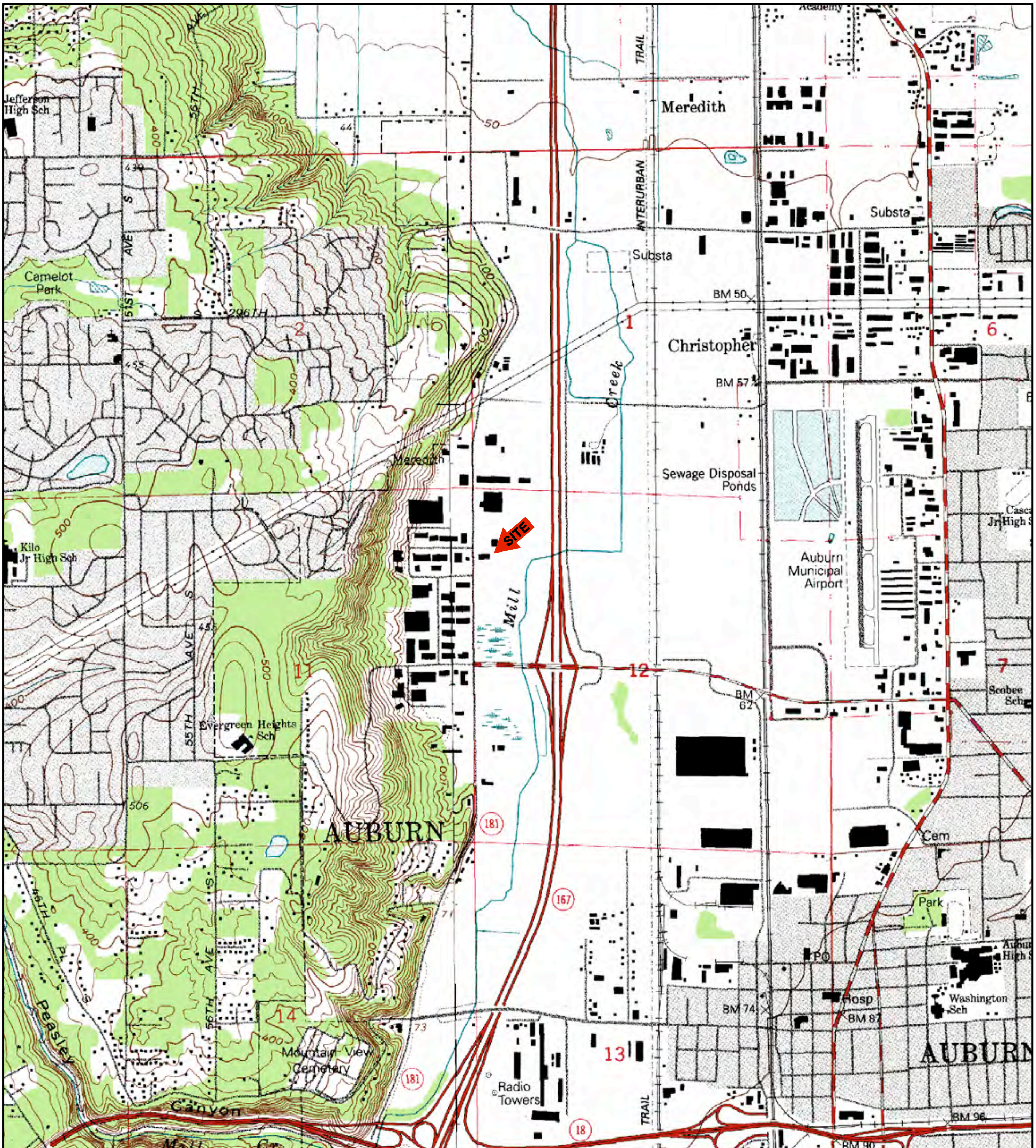
Table 1
Summary of Ground Water Sample
Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

Quarterly Ground Water Monitoring
Estes West Express Trucking Facility
2102 West Valley Highway North
Burien, Washington

Sample ID	Date Sampled	Well Elevation[a]	Depth to Water (feet below TOC)	Ground Water Elevation (feet msl)	GRPH[b]	DRPH[c]	HRPH[c]	Benzene[d]	Toluene[d]	Ethylbenzene[d]	Total Xylenes[d]
MW-1	8/12/11	100.51	6.12	94.39	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.51	5.42	95.09	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	100.51	4.76	95.75	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	100.51	5.35	95.16	<100	**1,100**	**480**	<1	<1	<1	<3
MW-2	8/12/11	100.56	5.51	95.05	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.56	5.13	95.43	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	100.56	4.94	95.06	<100	<50	<250	<1	<1	<1	<3
	5/17/12	100.56	5.42	95.14	<100	<50	<250	<1	<1	<1	<3
MW-3	8/12/11	100.50	5.54	94.96	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.50	8.90	91.60	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	100.50	5.05	95.45	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	100.50	5.60	94.90	<100	**53**	<250	<1	<1	<1	<3
MW-4	8/12/11	100.61	6.37	94.24	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.61	5.65	94.96	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	100.61	5.20	95.41	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	100.61	5.63	94.98	<100	**160**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)					**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88 (in feet above mean sea level)
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(d) Analyzed using EPA Method 8021B
(e) Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
bgs - Below ground surface
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but below MTCA Method A Ground Water Cleanup Level
Bold and Shaded = Concentration above MTCA Method A Ground Water Cleanup Level

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

epi ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	***DRAWN BY***	***REVIEWED BY***	***DATE***
1 of 1	*ARM*	*GAM*	*08/24/11*

Attachment

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 23, 2012

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes West Express Auburn WA

Dear Mr. McCormick:

Included are the results from the testing of material submitted on May 17, 2012 from the Estes West Express Auburn WA, F&BI 205262 project. There are 6 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
EPI0523R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 17, 2012 by Friedman & Bruya, Inc. from the Environmental Partners Estes West Express Auburn WA, F&BI 205262 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
205262-01	MW-1
205262-02	MW-2
205262-03	MW-3
205262-04	MW-4

All quality control requirements were acceptable.

Date of Report: 05/23/12
Date Received: 05/17/12
Project: Estes West Express Auburn WA, F&BI 205262
Date Extracted: 05/18/12
Date Analyzed: 05/19/12

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-1 205262-01	<1	<1	<1	<3	<100	87
MW-2 205262-02	<1	<1	<1	<3	<100	94
MW-3 205262-03	<1	<1	<1	<3	<100	91
MW-4 205262-04	<1	<1	<1	<3	<100	93
Method Blank 02-0863 MB	<1	<1	<1	<3	<100	91

Date of Report: 05/23/12
Date Received: 05/17/12
Project: Estes West Express Auburn WA, F&BI 205262
Date Extracted: 05/18/12
Date Analyzed: 05/18/12 and 05/19/12

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 50-150)
MW-1 205262-01	1,100	480 x	96
MW-2 205262-02	<50	<250	94
MW-3 205262-03	53 x	<250	99
MW-4 205262-04	160 x	<250	100
Method Blank 02-860 MB	<50	<250	97

Date of Report: 05/23/12
Date Received: 05/17/12
Project: Estes West Express Auburn WA, F&BI 205262

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

Laboratory Code: 205262-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	92	65-118
Toluene	ug/L (ppb)	50	90	72-122
Ethylbenzene	ug/L (ppb)	50	88	73-126
Xylenes	ug/L (ppb)	150	89	74-118
Gasoline	ug/L (ppb)	1,000	92	69-134

Date of Report: 05/23/12
Date Received: 05/17/12
Project: Estes West Express Auburn WA, F&BI 205262

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	85	93	63-142	9

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

205262

SAMPLE CHAIN OF CUSTODY

ME 05-17-12 D04/N2

Page # 1 of 1

Send Report To Greg McCormick

Company EPI

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah, WA

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Estes West Express Auburn, WA

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-1	01A-D	5/17/12	12:30	W	4	X	X	X										
MW-2	02	↓	12:20	W	4	X	X	X										
MW-3	03		1:00	W	4	X	X	X										
MW-4	04		12:45	W	4	X	X	X										

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Greg McCormick	EPI	5/17/12	2:35
Received by: [signature]	Do Vo	F&BI	〃	〃
Relinquished by:				
Received by:		Samples received at 6 °C		

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

September 24, 2012

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report – Fifth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown in Figure 2.

EPI understands that the property owner is seeking a No Further Action (NFA) determination for the Site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in the wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

Background

The Washington State Department of Ecology (Ecology) issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that quarterly ground water monitoring and reporting will continue until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year”. The NFA letter stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils”. Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the property owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels (CULs) was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, samples from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A CUL of 800 μg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Ground Water CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from the Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned Facility Site ID #91612121. Quarterly sampling of the four on-site wells resumed in August 2011. On March 26, 2012 Ecology notified the property owner that the January 2000 conditional NFA determination was rescinded since the benzene concentrations in groundwater from well MW-2 remained above MTCA CULs and the previous remedial remedy did not appear to have been effective at achieving the applicable cleanup level.

Ground Water Sampling Procedures

On August 28, 2012, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility of the data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 94.23 feet in MW-1 to 94.10 feet in MW-3 indicating ground water flow generally from a west to east direction. Previous groundwater flow directions were generally northwest to southeast.

Prior to sampling EPI purged the monitoring wells a minimum of two casing volumes of water using single-use, dedicated disposable polyethylene bailers. MW-2 and MW-3 were purged dry. All wells were allowed to recharge for approximately 1.5 hour prior to sampling with the dedicated bailer. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for analysis of:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method,
- BTEX by EPA Method 8021B; and

- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

Analytical Results

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water CULs.

- GRPH and BTEX compounds were not detected in samples collected from any of the wells.

- The sample from monitoring well MW-1 had a DRPH concentration of 1,200 μg/L with an HRPH concentration of 820 μg/L. Both DRPH and HRPH concentrations exceed the MTCA Method A Ground Water CUL of 500 μg/L for each. The DRPH concentration has increased slightly since the May 2012 sampling event but has decreased from the 1,500 μg/L concentration recorded in the MW-1 sample from the November 2011 sampling event. The HRPH concentration of 820 μg/L has also increased since the May sampling event and currently exceeds the Method A Ground Water CUL of 500 μg/L.

- The sample from MW-2 had a DRPH concentration of 470 μg/L and an HRPH concentration of 730 μg/L. Neither DRPH nor HRPH were detected in the sample from MW-2 during the May 2012 sampling event and the HRPH concentration in MW-2 currently exceeds the Method A Ground Water CUL of 500 μg/L.

- The sample from MW-3 had a DRPH concentration of 130 μg/L and has increased from 53 μg/L detected from MW-3 during the May sampling event. HRPH was not detected in the sample from MW-3.

- The sample from MW-4 had a DRPH concentration of 200 μg/L. The concentration of DRPH has increased in each of the sampling events since August 2011 but remains below the Method A Ground Water CUL. HRPH was not detected in the sample from MW-4.

Conclusions

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, continue to demonstrate no detectable concentrations of GRPH or BTEX compounds for the last five consecutive quarters of sampling.

- DRPH was detected at a concentration of 1,200 μg/L in the sample from monitoring well MW-1, which exceeds the MTCA Ground Water CUL of 500 μg/L. The DRPH concentration in MW-1 has exceeded the Method A Ground Water CUL for the past four quarterly sampling events and has increased from 1,100 μg/L in May 2012. The DRPH concentration in MW-2 was 470 μg/L with no detections in either of the two previous sampling events. Concentrations of DRPH were also detected in MW-3 and MW-4; however, both of these concentrations were well below the Method A Ground Water CUL. The continued presence of DRPH in MW-1 and the significant increase of DRPH in MW-2 suggest a recent source of DRPH possibly due to a change in on-site maintenance activities and/or waste handling practices on the north side of the truck maintenance building.

- The HRPH concentration has increased significantly in samples from MW-1 since May 2012. HRPH was also detected in for the first time in the sample from MW-2 at a concentration of 730 μg/L The increase in HRPH concentrations in samples from MW-1 and MW-2 appears to correspond to the general increases seen in DRPH concentrations in samples from all four wells during the same general timeframe and may be caused by a change in on-site maintenance activities and/or waste handling practices on the north side of the truck maintenance building.

- Neither GRPH nor BTEX compounds were detected in any of the wells indicating that residual gasoline impacts associated with the former 550-gallon UST removed in 1998 have been remediated due to source removal and natural attenuation.

EPI recommends continuing the quarterly ground water monitoring program at the Site. Based on historical sampling information for the Site, DRPH had not been detected in MW-1 since October 2000. Detections of DRPH in the past four sampling rounds and the recent appearance of HRPH exceeding the Method A CUL in samples from MW-1 and MW-2 potentially indicate an additional source of DRPH and HRPH impact in the northern part of the truck maintenance building.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,

Greg McCormick, L.G.
Senior Geologist

State of Washington
674
Licensed Geologist
GREGORY A. McCORMICK

TABLE

Table 1 – Summary of Ground Water Sample Results for GRPH, DRPH, HRPH, and BTEX (in μg/L)

FIGURES

Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT

Attachment A – Analytical Laboratory Report

Table

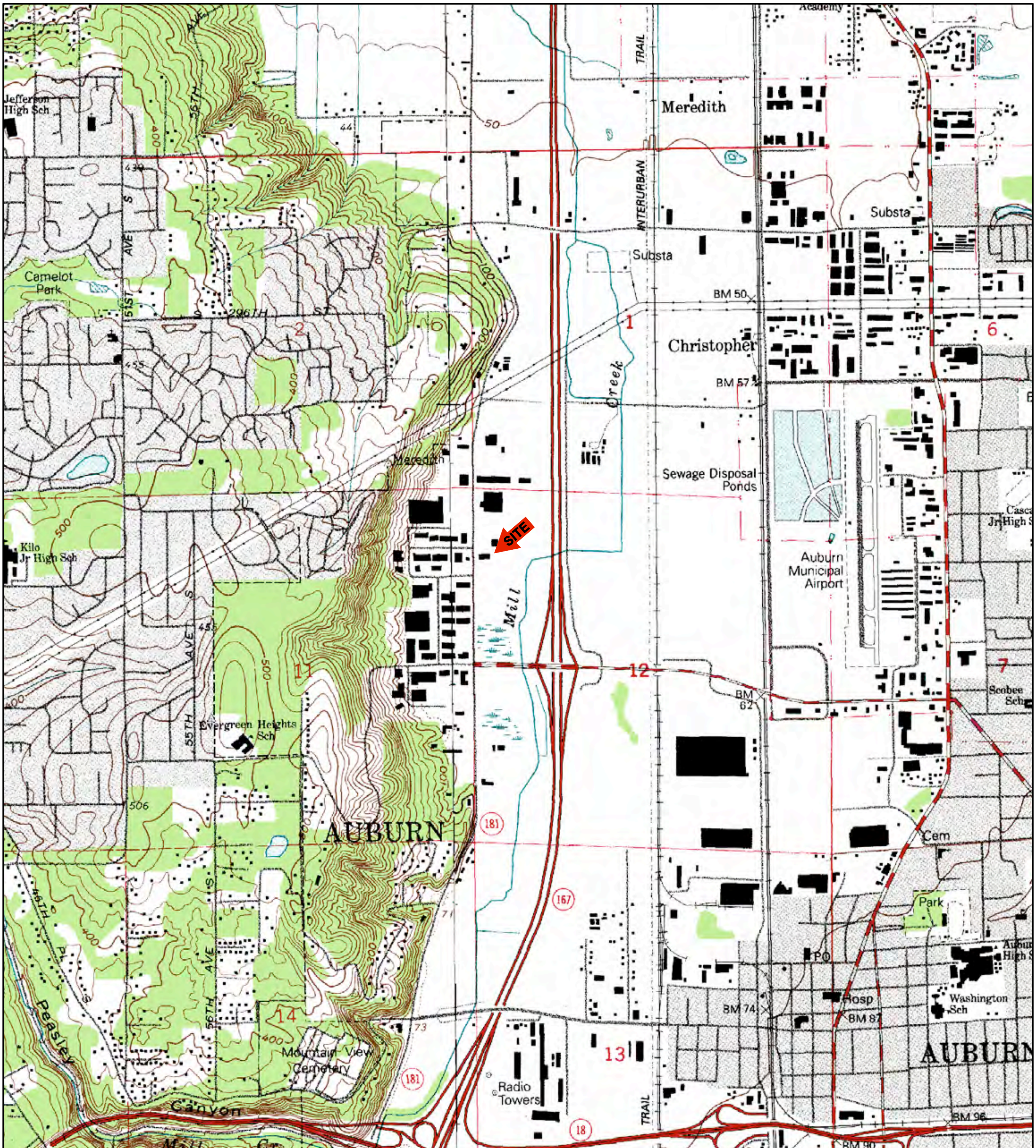
Table 1
Summary of Ground Water Sample
Analytical Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

Quarterly Ground Water Monitoring
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

Sample ID	Date Sampled	Well Elevation[a]	Depth to Water (feet below TOC)	Ground Water Elevation (feet msl)	GRPH[b]	DRPH[d]	HRPH[d]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	100.51	6.12	94.39	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.51	5.42	95.09	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	100.51	4.76	95.75	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	100.51	5.35	95.16	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	100.51	6.28	94.23	<100	**1,200**	**820**	<1	<1	<1	<3
MW-2	8/12/11	100.56	5.51	95.05	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.56	5.13	95.43	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	100.56	4.94	95.06	<100	<50	<250	<1	<1	<1	<3
	5/17/12	100.56	5.42	95.14	<100	<50	<250	<1	<1	<1	<3
	8/28/12	100.56	6.40	94.16	<100	**470**	**730**	<1	<1	<1	<3
MW-3	8/12/11	100.50	5.54	94.96	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.50	8.90	91.60	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	100.50	5.05	95.45	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	100.50	5.60	94.90	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	100.50	6.40	94.10	<100	**130**	<250	<1	<1	<1	<3
MW-4	8/12/11	100.61	6.37	94.24	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.61	5.65	94.96	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	100.61	5.20	95.41	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	100.61	5.63	94.98	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	100.61	6.50	94.11	<100	**200**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)					**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88 (in feet above mean sea level)
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
bgs - Below ground surface
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but below MTCA Method A Ground Water Cleanup Level
Bold and Shaded = Concentration above MTCA Method A Ground Water Cleanup Level

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

Attachment

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

September 20, 2012

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.0, F&BI 208479

Dear Mr. McCormick:

Included are the results from the testing of material submitted on August 31, 2012 from the 61901.0, F&BI 208479 project. There are 8 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
EPI0920R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 31, 2012 by Friedman & Bruya, Inc. from the Environmental Partners 61901.0, F&BI 208479 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
208479-01	MW-1
208479-02	MW-2
208479-03	MW-3
208479-04	MW-4

All quality control requirements were acceptable.

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479
Date Extracted: 09/06/12
Date Analyzed: 09/06/12

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-1 208479-01	<1	<1	<1	<3	<100	93
MW-2 208479-02	<1	<1	<1	<3	<100	94
MW-3 208479-03	<1	<1	<1	<3	<100	96
MW-4 208479-04	<1	<1	<1	<3	<100	95
Method Blank 02-1595 MB	<1	<1	<1	<3	<100	96

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479
Date Extracted: 08/31/12
Date Analyzed: 09/19/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
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 47-140)
MW-1 208479-01	280 x	700	ip
MW-2 208479-02	150 x	680	ip
MW-3 208479-03	<50	<250	134
MW-4 208479-04	<50	<250	136
Method Blank 02-1561 MB	<50	<250	118

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479
Date Extracted: 08/31/12
Date Analyzed: 09/04/12

**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 50-150)
MW-1 208479-01	1,200 x	820	129
MW-2 208479-02	470 x	730	122
MW-3 208479-03	130 x	<250	108
MW-4 208479-04	200 x	<250	120
Method Blank 02-1561 MB	<50	<250	110

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479

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

Laboratory Code: 208479-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	102	72-119
Toluene	ug/L (ppb)	50	98	71-113
Ethylbenzene	ug/L (ppb)	50	98	72-114
Xylenes	ug/L (ppb)	150	92	72-113
Gasoline	ug/L (ppb)	1,000	106	70-119

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479

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 Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	118	127	61-133	7

Date of Report: 09/20/12
Date Received: 08/31/12
Project: 61901.0, F&BI 208479

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	107	104	63-142	3

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

208479

SAMPLE CHAIN OF CUSTODY

ME 08-31-12 D03/ 1/4

Send Report To Greg McCormick
Company Environmental Partners, Inc.
Address 295 NE Gilman Blvd #201
City, State, ZIP Issaquah, WA
Phone # (425)395-0010 Fax # (425)395-0011

SAMPLERS (signature) [signature]

[redacted] # 1 of 1

PROJECT NAME/NO. Estes West Express Auburn, WA

PO#

REMARKS
Project No. 61901.0

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Dr w/SG						Notes
MW-1	01A-E	8/28/12	2:40	W	5	X	X	X				*						*-per GM
MW-2	02	↓	2:50	W	5	X	X	X				*						9/06/12
MW-3	03	↓	3:00	W	5	X	X	X				*						MG
MW-4	04	↓	3:15	W	5	X	X	X				*						

Samples received at 4 °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: [signature]	Greg McCormick	EPI	8/31/12	
Received by: [signature]	Edward S	Postal X	8/31/12	09:10
Relinquished by:				
Received by: [signature]	Do vo	F+BI	8-31-12	10:30

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Blvd., Ste. 201 Issaquah, WA 98027 ph 425.395.0010 fax 425.395.0011

November 30, 2012

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report – Sixth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this Ground Water Sampling Report for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown in Figure 2.

EPI understands that the property owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology) for the Site. The ground water sampling was requested to obtain current petroleum hydrocarbon contaminant concentrations in samples from the wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

Background

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that quarterly ground water monitoring and reporting will continue until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year". The NFA letter stipulated that analytical results for ground water compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils". Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the property owner petitioned for a full NFA determination based upon three years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels (CULs) was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration is less than its MTCA Method A CUL of 800 μg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Ground Water CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned Facility Site ID #91612121. Quarterly sampling of the four on-site wells resumed in August 2011. On March 26, 2012 Ecology notified the property owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous ground water remedy did not appear to have been effective at achieving the applicable MTCA Method A cleanup level.

Ground Water Sampling Procedures

On November 15, 2012, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 95.85 feet in MW-1 to 95.25 in both MW-3 and MW-4 indicating ground water flow generally from a west to east direction. Previous groundwater flow directions were generally northwest to southeast.

Prior to sampling EPI purged the monitoring wells a minimum of three casing volumes of water using single-use, dedicated disposable polyethylene bailers or until the wells were purged dry. MW-1 was purged dry after 3 gallons and MW-2 was purged dry after 2.75 gallons. MW-3 was purged of approximately 4.8 gallons and MW-4 was purged of approximately 4.7 gallons which equates to three well volumes in each case.

All wells were allowed to recharge for approximately 1.5 hours prior to sampling with the dedicated bailer. Purge water was temporarily stored in a 30-gallon drum placed near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for the following analyses:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method;
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

Analytical Results

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water CULs.

- GRPH and BTEX compounds were not detected in any of the samples.

- The sample collected from monitoring well MW-1, had a DRPH concentration of 2,700 μg/L with an HRPH concentration of 1,200 μg/L. Both DRPH and HRPH concentrations exceed the MTCA Method A Ground Water CUL of 500 μg/L for DRPH and HRPH.

- The sample collected from MW-2 had a DRPH concentration of 140 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in this sample.

- The sample collected from MW-3 had a DRPH concentration of 120 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in this sample.

- The sample collected from MW-4 had a DRPH concentration of 220 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in this sample.

Conclusions and Recommendations

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, have had no detectable concentrations of GRPH or BTEX compounds for the last six consecutive quarters of sampling. This suggests that residual gasoline impacts associated with the former 550-gallon UST removed in 1998 have been remediated, likely as a result of source removal and natural attenuation.

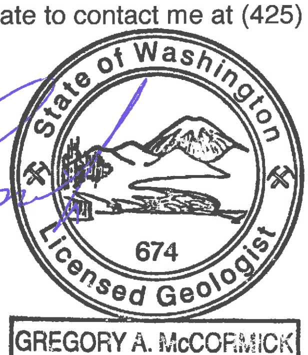
- The DRPH concentration in MW-1 has exceeded the Method A Ground Water CUL for the past five quarterly sampling events and has increased from 1,200 μg/L in the previous (August 2012) sampling round to 2,700 μg/L during the current sampling event. The DRPH concentration in MW-2 decreased significantly during the same time period. Concentrations of DRPH were also detected in MW-3 and MW-4; however, both of these concentrations were well below the Method A Ground Water CUL and are stable. The steady increase in the DRPH concentration in MW-1 strongly suggests a recent source of DRPH at the northwest corner of the maintenance building possibly due to a change in on-site maintenance activities and/or waste handling practices.

- The HRPH concentration in MW-1 has increased significantly since August 2012; however, the HRPH concentration in MW-2 has decreased significantly. The increase in HRPH concentration in the sample from MW-1 appears to correspond to the general increases seen in DRPH concentrations in MW-1 at the northwest corner of the maintenance building. The HRPH exceedence in MW-2 in the August round appears to be an anomaly since HRPH had not been detected in any of the previous four sampling rounds.

EPI recommends continuing the quarterly ground water monitoring program at the Site. Based on historical sampling information for the Site, DRPH had not been detected in samples from MW-1 since October 2000. Detections of DRPH in the past five sampling rounds and the recent detected concentrations of HRPH exceeding the Method A CUL in MW-1 indicate the likely presence of a new source of DRPH and HRPH impact in the northwestern part of the truck maintenance building. Washing down oily truck parts and parking tractor-trailers in the vicinity of the MW-1, should be discontinued.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,



Greg McCormick, L.G.
Senior Geologist

cc: Mr. Russ Olsen, WDOE-Northwest Regional Office

TABLE
Table 1 – Summary of Ground Water Sample Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

FIGURES
Figure 1 – General Vicinity Map
Figure 2 – Site Representation

ATTACHMENT
Attachment A – Analytical Laboratory Report

Table

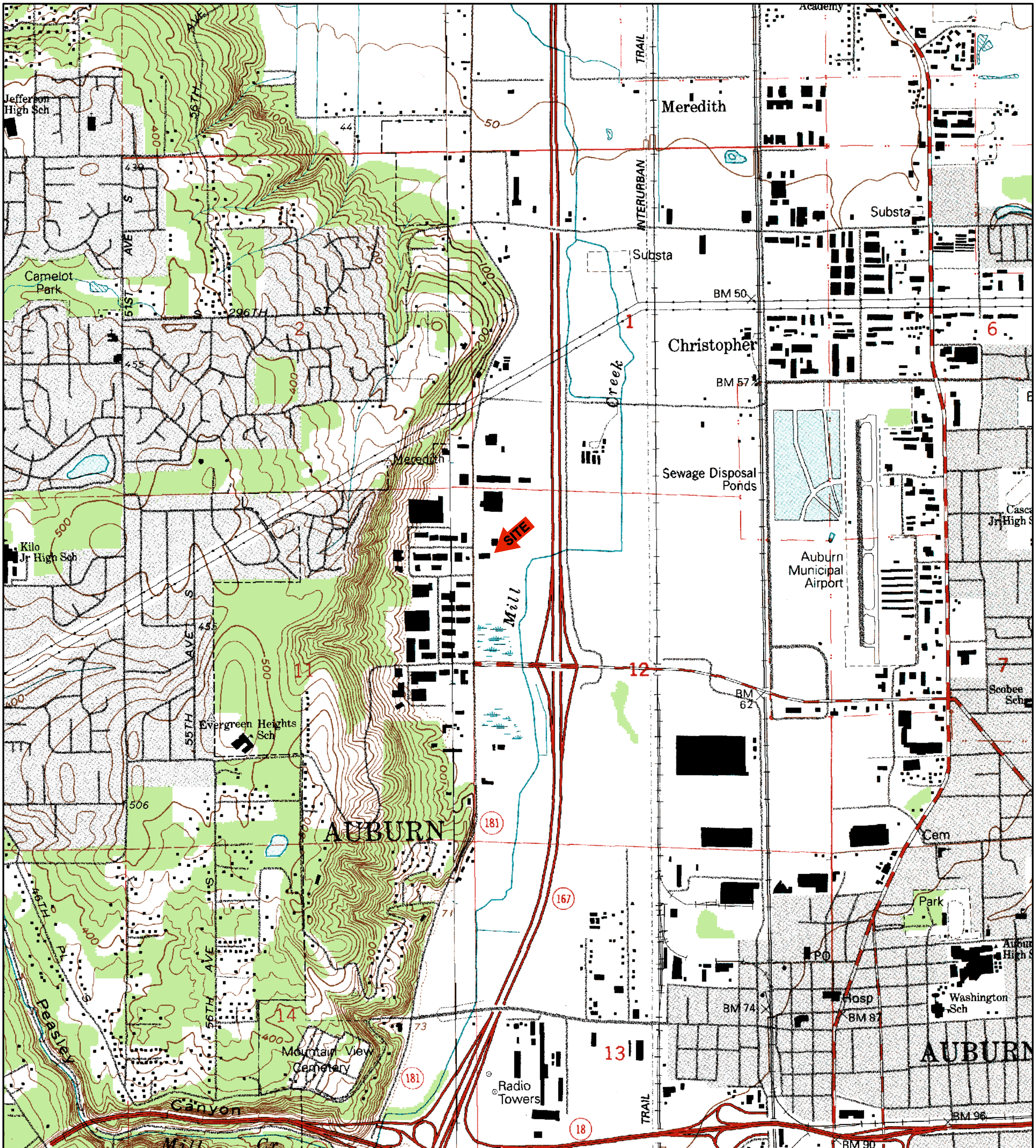
Table 1
Summary of Ground Water Sample
Analytical Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

Quarterly Ground Water Monitoring
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

Sample ID	Date Sampled	Well Elevation[a]	Depth to Water (feet below TOC)	Ground Water Elevation (feet msl)	GRPH[b]	DRPH[d]	HRPH[d]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	100.51	6.12	94.39	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.51	5.42	95.09	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	100.51	4.76	95.75	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	100.51	5.35	95.16	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	100.51	6.28	94.23	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	100.51	4.99	95.85	<100	**2,700**	**1,200**	<1	<1	<1	<3
MW-2	8/12/11	100.56	5.51	95.05	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.56	5.13	95.43	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	100.56	4.94	95.06	<100	<50	<250	<1	<1	<1	<3
	5/17/12	100.56	5.42	95.14	<100	<50	<250	<1	<1	<1	<3
	8/28/12	100.56	6.40	94.16	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	100.56	5.12	95.44	<100	**140**	<260	<1	<1	<1	<3
MW-3	8/12/11	100.50	5.54	94.96	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.50	8.90	91.60	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	100.50	5.05	95.45	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	100.50	5.60	94.90	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	100.50	6.40	94.10	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	100.50	5.25	95.25	<100	**120**	<280	<1	<1	<1	<3
MW-4	8/12/11	100.61	6.37	94.24	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.61	5.65	94.96	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	100.61	5.20	95.41	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	100.61	5.63	94.98	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	100.61	6.50	94.11	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	100.61	5.36	95.25	<100	**220**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)					**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88 (in feet above mean sea level)
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
bgs - Below ground surface
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but below MTCA Method A Ground Water Cleanup Level
Bold and Shaded = Concentration above MTCA Method A Ground Water Cleanup Level

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

epi ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

Attachment

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 29, 2012

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.1, F&BI 211286

Dear Mr. McCormick:

Included are the results from the testing of material submitted on November 15, 2012 from the 61901.1, F&BI 211286 project. There are 6 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
EPI1129R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 15, 2012 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 211286 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
211286-01	MW-1
211286-02	MW-2
211286-03	MW-3
211286-04	MW-4

All quality control requirements were acceptable.

Date of Report: 11/29/12
Date Received: 11/15/12
Project: 61901.1, F&BI 211286
Date Extracted: 11/16/12
Date Analyzed: 11/16/12

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-1 211286-01	<1	<1	<1	<3	<100	97
MW-2 211286-02	<1	<1	<1	<3	<100	93
MW-3 211286-03	<1	<1	<1	<3	<100	89
MW-4 211286-04	<1	<1	<1	<3	<100	94
Method Blank 02-2115 MB	<1	<1	<1	<3	<100	74

Date of Report: 11/29/12
Date Received: 11/15/12
Project: 61901.1, F&BI 211286
Date Extracted: 11/19/12
Date Analyzed: 11/20/12

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 47-140)
MW-1 211286-01	2,700 x	1,200 x	117
MW-2 211286-02	140 x	<260	107
MW-3 211286-03	120 x	<280	104
MW-4 211286-04	220 x	<250	105
Method Blank 02-2161 MB	<50	<250	104

Date of Report: 11/29/12
Date Received: 11/15/12
Project: 61901.1, F&BI 211286

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

Laboratory Code: 211259-08 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	98	72-119
Toluene	ug/L (ppb)	50	96	71-113
Ethylbenzene	ug/L (ppb)	50	96	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	98	70-119

Date of Report: 11/29/12
Date Received: 11/15/12
Project: 61901.1, F&BI 211286

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	116	122	61-133	5

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

211286

SAMPLE CHAIN OF CUSTODY

ME 11-15-12 V2

Page # 1 of 1

Send Report To Greg McCormick

Company Enviromental Partners

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah, WA

Phone # (425) 922-6392 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 61901.1

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	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
MW-1	01 A-D	11/15/12	12:30	W	4	X	X	X									
MW-2	02		12:45	W	4	X	X	X									
MW-3	03		1:05	W	4	X	X	X									
MW-4	04		1:25	W	4	X	X	X									

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:	Greg McCormick	EPI	11/15/12	3:30
Received by:	Dao Vo	F&BI	"	"
Relinquished by:				
Received by:		Samples received at 8 °C		

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

March 14, 2013

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report—Seventh Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.0

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Ground Water Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the ground water sampling is to obtain current petroleum hydrocarbon contaminant concentrations in samples from the four on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contains the condition that quarterly ground water monitoring and reporting will continue until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) ground water cleanup levels for at least one year.” The NFA letter stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the property owner petitioned for a full NFA determination based upon 3 years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A Cleanup Levels (CULs) was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration is less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA due to the benzene concentration exceeding its MTCA Method A Ground Water CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells resumed in August 2011. On March 26, 2012 Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in ground water samples from well MW-2 remained above MTCA CULs and the previous ground water remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

GROUND WATER SAMPLING PROCEDURES

On February 14, 2013, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 95.29 feet in MW-1 to 95.11 in MW-4 indicating ground water flow generally from the northwest to the southeast. Top-of-casing elevations were surveyed to vertical datum NAVD 88. This is consistent with previous ground water flow directions.

Prior to sampling, EPI purged the monitoring wells a minimum of three casing volumes of water or until the well was purged dry using single-use, disposable polyethylene bailers. MW-1 and MW-3 were purged dry after approximately 3 gallons. Three well volumes of 4.5 gallons and 4.8 gallons were purged from MW-2 and MW-4, respectively.

All wells were allowed to recharge for approximately 1 hour prior to sampling using their assigned single use bailers. Purge water was temporarily stored in a 30-gallon drum temporarily stored near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for the following analyses:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method;

- BTEX by EPA Method 8021B; and

- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include heavier oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

ANALYTICAL RESULTS

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water CULs.

- GRPH and BTEX compounds were not detected in any of the samples.

- The sample collected from monitoring well MW-1 had a DRPH concentration of 1,600 µg/L with an HRPH concentration of 510 µg/L. Both DRPH and HRPH concentrations exceed the MTCA Method A Ground Water CUL of 500 µg/L for DRPH and HRPH, but the concentrations have decreased significantly since the November 2012 sampling round.

- The sample collected from MW-2 had a DRPH concentration of 94 µg/L and an HRPH concentration of 260 µg/L. Both concentrations are less than the MTCA Method A Ground Water CUL of 500 µg/L.

- The sample collected from MW-3 had a DRPH concentration of 150 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in the sample.

- The sample collected from MW-4 had a DRPH concentration of 220 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in the sample.

CONCLUSIONS AND RECOMMENDATIONS

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, have had no detectable concentrations of GRPH or BTEX compounds for the last seven consecutive quarters of sampling. This consistent record of non-detects suggests that residual gasoline impacts associated with the former 550-gallon UST removed in 1998 have been successfully remediated, likely as a result of source removal and natural attenuation.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Ground Water CUL for the past six quarterly sampling events, but has decreased from its greatest concentration of 2,700 µg/L in the November 2012 sampling round. DRPH concentrations in samples from MW-2 decreased significantly during the same time period. The significant decrease in the DRPH concentration suggests that the impacts first observed in November 2011 may have been due to short-term truck parking and outdoor storage of oily engine parts outside the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- DRPH was also detected in samples from MW-3 and MW-4; however, both of these concentrations were significantly less than the Method A Ground Water CUL and time trends suggest that these concentrations are stable.

- HRPH concentrations in the sample from MW-1 also decreased significantly from 1,200 µg/L in November 2012 to 510 µg/L in February 2013. The decrease in HRPH concentrations in the samples from MW-1 appear to correspond to the decreases seen in DRPH concentrations in MW-1 due to the apparent change in maintenance and parts storage practices at the northwest corner of the building. HRPH was also detected in the sample from MW-2 at a concentration of 260 µg/L. HRPH concentrations in MW-2 have been less than the MTCA Method A Ground Water CUL for the past two sampling rounds. HRPH was not detected in samples from MW-3 or MW-4.

Based upon these sampling results, EPI recommends continuing the quarterly ground water monitoring program at the Site. Detections of DRPH in the past six sampling rounds and the recently detected concentrations of HRPH exceeding the Method A CUL in the sample from MW-1 suggest that these impacts may be due to vehicle parking and oily engine parts storage outside the northwest corner of the building. These practices have been largely discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from all other wells continue to be less than the MTCA Method A CUL for both DRPH and HRPH. Continued monitoring should confirm this decreasing concentration trend.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,

State of Washington
674
Licensed Geologist
GREGORY A. McCORMICK

Greg McCormick, L.G.
Senior Geologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Table

Table 1 Summary of Ground Water Sample Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

Figures

Figure 1 General Vicinity Map

Figure 2 Site Representation

Attachment

Attachment A Analytical Laboratory Report

Table

Table 1
Summary of Ground Water Sample
Analytical Results for GRPH, DRPH, HRPH, and BTEX[a] (in µg/L)

Quarterly Ground Water Monitoring
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

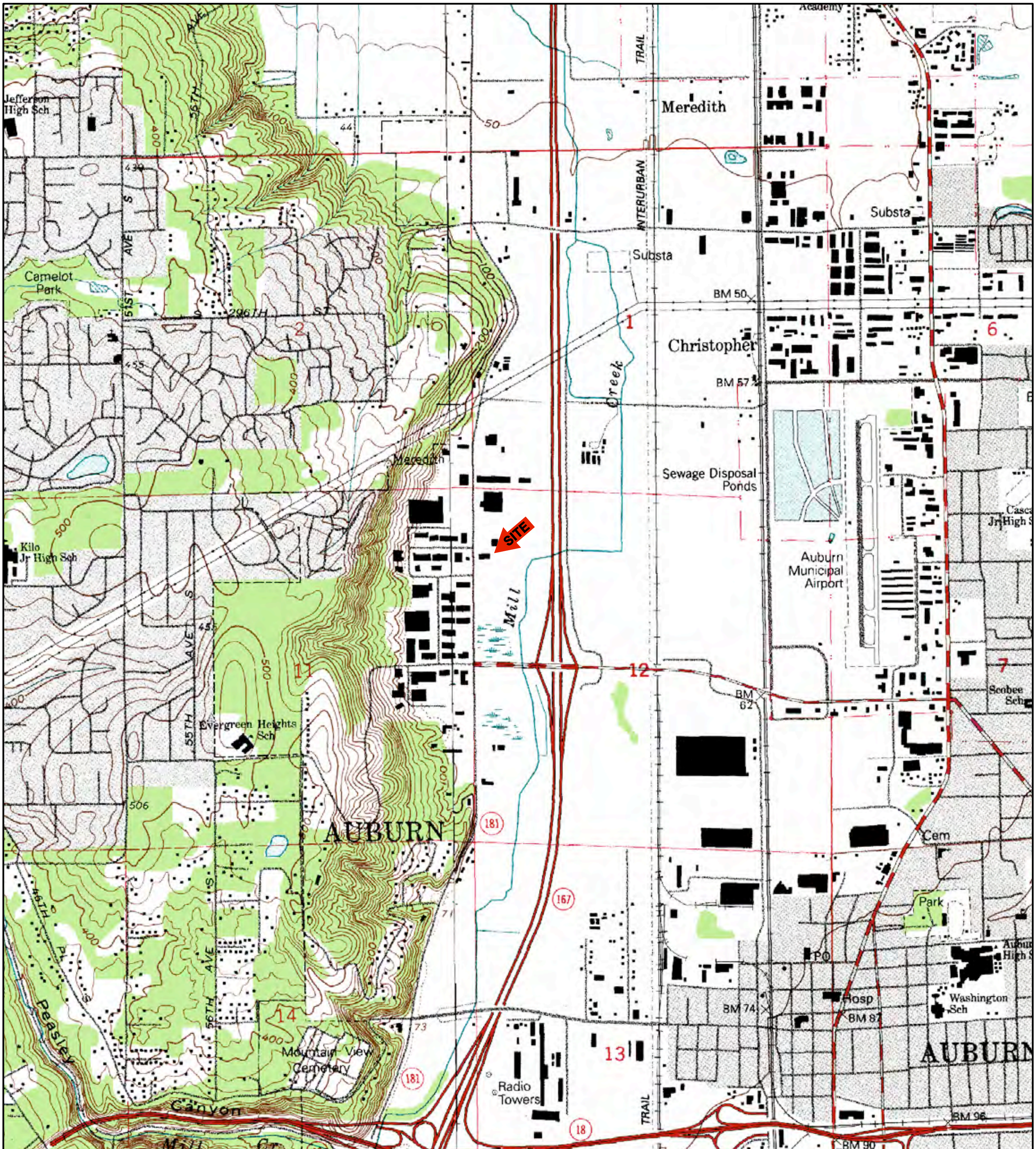
Sample ID	Date Sampled	Well Elevation[b]	Depth to Water (feet below TOC)	Ground Water Elevation	GRPH[c]	DRPH[d]	HRPH[d]	Benzene[e]	Toluene[e]	Ethylbenzene[e]	Total Xylenes[e]
MW-1	8/12/11	100.51	6.12	94.39	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.51	5.42	95.09	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	100.51	4.76	95.75	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	100.51	5.35	95.16	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	100.51	6.28	94.23	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	100.51	4.99	95.85	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	100.51	5.22	95.29	<100	**1,600**	**510**	<1	<1	<1	<3
MW-2	8/12/11	100.56	5.51	95.05	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.56	5.13	95.43	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	100.56	4.94	95.06	<100	<50	<250	<1	<1	<1	<3
	5/17/12	100.56	5.42	95.14	<100	<50	<250	<1	<1	<1	<3
	8/28/12	100.56	6.40	94.16	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	100.56	5.12	95.44	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	100.56	5.32	95.24	<100	**94**	**260**	<1	<1	<1	<3
MW-3	8/12/11	100.50	5.54	94.96	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.50	8.90	91.60	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	100.50	5.05	95.45	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	100.50	5.60	94.90	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	100.50	6.40	94.10	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	100.50	5.25	95.25	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	100.50	5.38	95.12	<100	**150**	<250	<1	<1	<1	<3
MW-4	8/12/11	100.61	6.37	94.24	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.61	5.65	94.96	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	100.61	5.20	95.41	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	100.61	5.63	94.98	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	100.61	6.50	94.11	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	100.61	5.36	95.25	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	100.61	5.50	95.11	<100	**220**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)					**800/1,000[f]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

Notes:

a Sample analysis performed by Friedman & Bruya, Inc.
b Vertical datum NAVD 88
c Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
d Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
e Analyzed using EPA Method 8021B
f Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
Bold Compound detected at a concentration less than the MTCA Method A Ground Water Cleanup Level.
1,500 **Detected c**oncentration isgreater than the MTCA Method A Ground Water Cleanup Level.

Abbreviation:
µg/L Micrograms per liter

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

UNDERGROUND STORAGE TANK

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	**DRAWN BY**	**REVIEWED BY**	**DATE**
1 of 1	*ALW*	*GAM*	*12/27/12*

Attachment

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 22, 2013

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.1, F&BI 302198

Dear Mr. McCormick:

Included are the results from the testing of material submitted on February 14, 2013 from the 61901.1, F&BI 302198 project. There are 6 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
EPI0222R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 14, 2013 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 302198 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
302198-01	MW-1
302198-02	MW-2
302198-03	MW-3
302198-04	MW-4

All quality control requirements were acceptable.

Date of Report: 02/22/13
Date Received: 02/14/13
Project: 61901.1, F&BI 302198
Date Extracted: 02/15/13
Date Analyzed: 02/15/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-1 302198-01	<1	<1	<1	<3	<100	101
MW-2 302198-02	<1	<1	<1	<3	<100	100
MW-3 302198-03	<1	<1	<1	<3	<100	99
MW-4 302198-04	<1	<1	<1	<3	<100	97
Method Blank 03-0266 MB	<1	<1	<1	<3	<100	96

Date of Report: 02/22/13
Date Received: 02/14/13
Project: 61901.1, F&BI 302198
Date Extracted: 02/19/13
Date Analyzed: 02/20/13

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 47-140)
MW-1 302198-01	1,600 x	510 x	92
MW-2 302198-02	94 x	260 x	88
MW-3 302198-03	150 x	<250	93
MW-4 302198-04	220 x	<250	101
Method Blank 03-302 MB	<50	<250	94

Date of Report: 02/22/13
Date Received: 02/14/13
Project: 61901.1, F&BI 302198

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

Laboratory Code: 302167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	97	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

Date of Report: 02/22/13
Date Received: 02/14/13
Project: 61901.1, F&BI 302198

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	89	96	61-133	8

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

302198

SAMPLE CHAIN OF CUSTODY

ME 02-14-13 V2/1 A04

Send Report To Greg McCormick

Company Environmental Partners

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah, WA

Phone # (425) 395-0010 Fax #

SAMPLERS (signature) M Cormick

PROJECT NAME/NO. Estes Express 61901.1

PO#

REMARKS

Page # 1 of 1

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
					GML	ANALYSES REQUESTED												
MW-1	01 A-C	2/14/13	1:45	water	3 ~~2~~	X	X	X										
MW-2	02 A-D	↓	2:05	water	4 ~~3~~	X	X	X										
MW-3	03 A-D		2:30	water	4 ~~3~~	X	X	X										
MW-4	04 A-D		2:50	water	4 ~~3~~	X	X	X										

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: M Cormick	Greg McCormick	EPI	2/14/13	3:40
Received by: Dav	D C VO	F&BI	〃	〃
Relinquished by:				
Received by:		~~Samples received at~~ 8 °C		

FORMS\COC\COC.DOC

June 4, 2013

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report - Eighth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Ground Water Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the ground water sampling is to obtain current petroleum hydrocarbon contaminant concentrations in samples from the four on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly ground water monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Ground Water Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in ground water samples from well MW-2 remained above MTCA CULs and the previous ground water remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and ground water sampling results.

GROUND WATER SAMPLING PROCEDURES

On May 16, 2013, EPI sampled the four existing monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 95.09 feet North American Vertical Datum 1988 (NAVD 88) in MW-1 to 94.94 feet NAVD 88 in both MW-3 and MW-4 indicating ground water flow generally from the northwest to the southeast. This is consistent with previous ground water flow directions.

Prior to sampling, EPI purged the monitoring wells dry using single-use, disposable polyethylene bailers. All wells then allowed to recharge for approximately 1 hour prior to sampling using their well-specific bailers that were used for purging. Purge water was transferred to a 30-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

The ground water samples were submitted for the following analyses:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method;

- BTEX by EPA Method 8021C; and

- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include higher oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington.

ANALYTICAL RESULTS

The final laboratory analytical report and chain-of-custody form are included as Attachment A. The following findings are based on a review of the analytical data relative to MTCA Method A Ground Water CULs.

- GRPH and BTEX compounds were not detected in any of the ground water samples.

- The sample collected from monitoring well MW-1 had a DRPH concentration of 1,500 μg/L and an HRPH concentration of 340 μg/L. The DRPH concentration exceeds the MTCA Method A Ground Water CUL for DRPH of 500 μg/L. The HRPH concentration has decreased to less than the MTCA Method A CUL for the first time since May 2012. Both concentrations have decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling round (see Table 1).

- The sample collected from MW-2 had a DRPH concentration of 77 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in the sample.

- The sample collected from MW-3 had a DRPH concentration of 200 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in the sample.

- The sample collected from MW-4 had a DRPH concentration of 210 μg/L, which is less than the MTCA Method A Ground Water CUL of 500 μg/L. HRPH was not detected in the sample.

CONCLUSIONS AND RECOMMENDATIONS

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, have had no detectable concentrations of GRPH or BTEX compounds in the eight consecutive quarters of sampling performed since August 2011. This consistent record of non-detects indicates that residual gasoline impacts associated with the former 550-gallon UST removed in 1998 have been successfully remediated, likely as a result of source removal and natural attenuation.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Ground Water CUL for the past seven quarterly sampling events, but has decreased significantly from its greatest concentration of 2,700 µg/L in the November 2012 sampling round. DRPH concentrations in samples from MW-2 decreased steadily during the same time period. The significant decrease in the DRPH concentration suggests that the impacts first observed in November 2011 may have been due to short-term truck parking and outdoor storage of oily engine parts outside the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- DRPH was also detected in samples from MW-3 and MW-4; however, both of these concentrations were significantly less than the Method A Ground Water CUL and time trends suggest that these concentrations are stable.

- HRPH concentrations in the sample from MW-1 have also decreased significantly from 1,200 µg/L in November 2012 to 340 µg/L in the current round. The decrease in HRPH concentrations in the samples from MW-1 appears to correspond to the decreases seen in DRPH concentrations in samples from MW-1 due to the apparent change in maintenance activity and parts storage practices at the northwest corner of the building. HRPH was not detected in samples from the other three wells.

Based upon these sampling results, EPI recommends continuing the quarterly ground water monitoring program at the Site. Detections of DRPH in the past seven sampling rounds suggest that these impacts may be due to vehicle parking and engine parts storage outside the northwest corner of the building. These practices have been discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from all other wells continue to be less than the MTCA Method A CUL for GRPH, DRPH, HRPH and BTEX. Continued monitoring is expected to confirm this decreasing concentration trend and consistent non-detections for BTEX.

Mr. Eugene Freeman, the Ecology Site Manager overseeing the project through the Voluntary Cleanup Program, issued an Opinion Letter on April 22, 2013. In the letter Mr. Freeman summarized the findings of the on-going ground water monitoring program at the Site and indicated that an additional monitoring well would be required hydraulically downgradient of MW-1 to delineate the lateral and vertical extent of a petroleum hydrocarbon plume.

In a subsequent email communication on May 8th, Mr. Freeman indicated that a sixth monitoring well should be installed hydraulically downgradient of the former 12,000-gallon diesel fuel UST removed in November 2012. Mr. Freeman provided a site map with the preferred locations of the two new wells with his email. EPI has arranged to have the two new wells installed on June 5th, 2013. MW-5 will be installed near the southwest corner of the maintenance building and MW-6 will be installed southeast of the former 12,000-gallon diesel fuel UST. The wells will be sampled upon completion and development and the results will be provided in the August 2013 *Ground Water Sampling Report.*

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0010.

Sincerely,

State of Washington
674
Licensed Geologist
GREGORY A. McCORMICK

Greg McCormick, L.G.
Senior Geologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Table

Table 1 Summary of Ground Water Sample Results for GRPH, DRPH, HRPH, and BTEX (in µg/L)

Figures

Figure 1 General Vicinity Map

Figure 2 Site Representation

Attachment

Attachment A Analytical Laboratory Report

Table

Table 1
Summary of Ground Water Sample
Analytical Results for GRPH, DRPH, HRPH, and BTEX[a] (in µg/L)

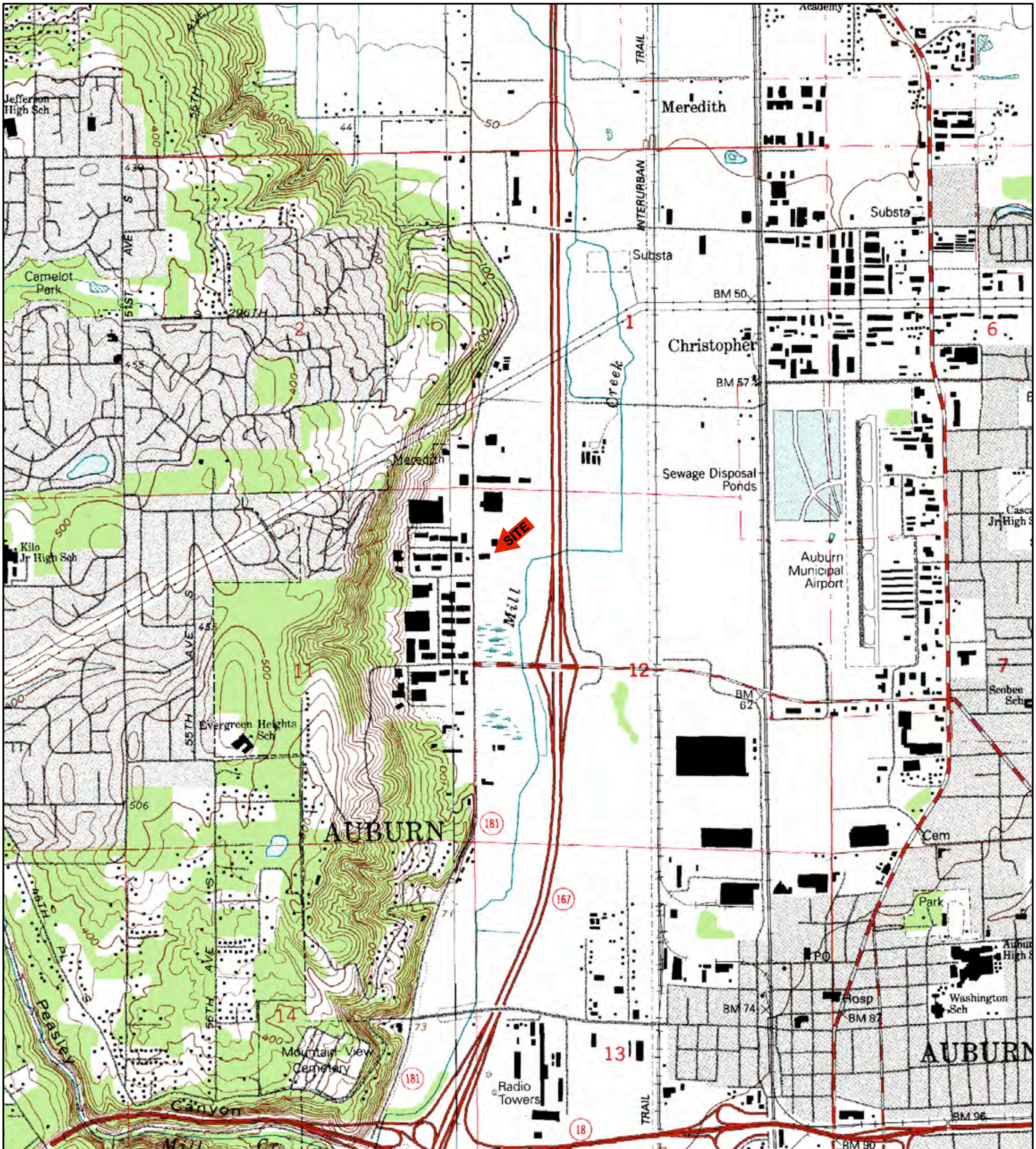
Quarterly Ground Water Monitoring
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington

Sample ID	Date Sampled	Well Elevation[b]	Depth to Water (feet below TOC)	Ground Water Elevation[b]	GRPH[c]	DRPH[d]	HRPH[d]	Benzene[e]	Toluene[e]	Ethylbenzene[e]	Total Xylenes[e]
MW-1	8/12/11	100.51	6.12	94.39	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.51	5.42	95.09	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	100.51	4.76	95.75	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	100.51	5.35	95.16	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	100.51	6.28	94.23	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	100.51	4.99	95.85	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	100.51	5.22	95.29	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	100.51	5.42	95.09	<100	**1,500**	**340**	<1	<1	<1	<3
MW-2	8/12/11	100.56	5.51	95.05	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.56	5.13	95.43	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	100.56	4.94	95.06	<100	<50	<250	<1	<1	<1	<3
	5/17/12	100.56	5.42	95.14	<100	<50	<250	<1	<1	<1	<3
	8/28/12	100.56	6.40	94.16	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	100.56	5.12	95.44	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	100.56	5.32	95.24	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	100.56	5.48	95.08	<100	**77**	<250	<1	<1	<1	<3
MW-3	8/12/11	100.50	5.54	94.96	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.50	8.90	91.60	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	100.50	5.05	95.45	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	100.50	5.60	94.90	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	100.50	6.40	94.10	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	100.50	5.25	95.25	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	100.50	5.38	95.12	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	100.50	5.56	94.94	<100	**200**	<250	<1	<1	<1	<3
MW-4	8/12/11	100.61	6.37	94.24	<100	<250	<500	<1	<1	<1	<3
	11/11/11	100.61	5.65	94.96	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	100.61	5.20	95.41	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	100.61	5.63	94.98	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	100.61	6.50	94.11	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	100.61	5.36	95.25	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	100.61	5.50	95.11	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	100.61	5.67	94.94	<100	**210**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)					**800/1,000[f]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

Notes:
a Sample analysis performed by Friedman & Bruya, Inc.
b Vertical datum NAVD 88
c Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
d Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
e Analyzed using EPA Method 8021B
f Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
Bold Compound detected at a concentration less than the MTCA Method A Ground Water Cleanup Level.
1,500 **Detected c**oncentration is greater than the MTCA Method A Ground Water Cleanup Level.

Abbreviation:
µg/L Micrograms per liter

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

KEY:

MW-1 MONITORING WELL LOCATION

GROUNDWATER FLOW DIRECTION

UNDERGROUND STORAGE TANK

0 20 40 80

APPROXIMATE SCALE: 1" = 80'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 2

SITE REPRESENTATION

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ALW	GAM	12/27/12

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 23, 2013

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes Express Auburn, WA

Dear Mr. McCormick:

Included are the results from the testing of material submitted on May 16, 2013 from the Estes Express Auburn, WA, F&BI 305331 project. There are 6 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
EPI0523R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2013 by Friedman & Bruya, Inc. from the Environmental Partners Estes Express Auburn, WA, F&BI 305331 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
305331 -01	MW-1
305331 -02	MW-2
305331 -03	MW-3
305331 -04	MW-4

All quality control requirements were acceptable.

Date of Report: 05/23/13
Date Received: 05/16/13
Project: Estes Express Auburn, WA, F&BI 305331
Date Extracted: 05/17/13
Date Analyzed: 05/18/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-1 305331-01	<1	<1	<1	<3	<100	91
MW-2 305331-02	<1	<1	<1	<3	<100	90
MW-3 305331-03	<1	<1	<1	<3	<100	88
MW-4 305331-04	<1	<1	<1	<3	<100	91
Method Blank 03-0883 MB	<1	<1	<1	<3	<100	90

Date of Report: 05/23/13
Date Received: 05/16/13
Project: Estes Express Auburn, WA, F&BI 305331
Date Extracted: 05/20/13
Date Analyzed: 05/21/13

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 47-140)
MW-1 305331-01	1,500 x	340 x	96
MW-2 305331-02	77 x	<250	91
MW-3 305331-03	200 x	<250	87
MW-4 305331-04	210 x	<250	104
Method Blank 03-940 MB	<50	<250	85

Date of Report: 05/23/13
Date Received: 05/16/13
Project: Estes Express Auburn, WA, F&BI 305331

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

Laboratory Code: 305322-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	5.5	5.3	4
Ethylbenzene	ug/L (ppb)	1.1	1.1	0
Xylenes	ug/L (ppb)	3.2	3.2	0
Gasoline	ug/L (ppb)	210	210	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	99	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	100	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Date of Report: 05/23/13
Date Received: 05/16/13
Project: Estes Express Auburn, WA, F&BI 305331

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	104	109	61-133	5

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

305331

SAMPLE CHAIN OF CUSTODY

ME 05-16-13 E02/1/V3

Page # 1 of 1

Send Report To Greg McCormick

Company Environmental Partners Inc

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah WA

Phone # (425) 922-6392 Fax # (425) 395-0011

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Estes Express Auburn, WA

PO#

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-1	01A-D	5/16/13	12:00	W	4	X	X	X										
MW-2	02	↓	12:20	W	4	X	X	X										
MW-3	03	↓	1:05	W	4	X	X	X										
MW-4	04	↓	1:45	W	4	X	X	X										
																		Samples received at 8 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Greg McCormick	EPI	5/16/13	1410
Received by: [signature]	Nhan Phan	FeBI	5/16/13	1410
Relinquished by:				
Received by:				

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

October 9, 2013

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Ground Water Sampling Report - Ninth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Ground Water Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the ground water sampling is to monitor ground water geochemical conditions and petroleum hydrocarbon concentrations in samples from the six on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and ground water at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly ground water monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Ground Water Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for ground water compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in ground water at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in ground water samples from well MW-2 remained above MTCA CULs and the previous ground water remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and ground water sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor ground water downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate ground water quality based petroleum hydrocarbon detections in a ground water sample from the bottom of the UST excavation during decommissioning activities.

GROUND WATER SAMPLING PROCEDURES

On August 14, 2013 EPI sampled the six monitoring wells at the Site as part of the current quarterly ground water sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Ground water elevations ranged from 94.34 feet North American Vertical Datum 1988 (NAVD 88) in MW-1 to 94.19 feet NAVD 88 in both MW-3 and MW-4 indicating ground water flow was generally from west to east at the time of the sampling event as shown in Figure 2. Previous ground water flow directions at the site were generally from northwest to southeast. The ground water gradient at the Site is so flat that minor changes in ground water elevations and even normal measurement variability can affect the calculated ground water flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 30-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Ground water samples were collected from all six wells for the following analyses:

- GRPH using the Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method;
- BTEX by EPA Method 8021B; and
- DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include higher oil-range hydrocarbons).

Immediately upon collection, filled ground water sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Ground Water CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.18 milligrams per liter (mg/L) in purge water from MW-4 to 0.58 mg/L in the purge water from MW-2. The very low measured DO concentrations in purge water from all six wells indicate anaerobic geochemical conditions.

- ORP measurements ranged from -72.3 millivolts (mV) in purge water from MW-1 to -22.9 in purge water from MW-3. These consistently negative ORP measurements indicate anaerobic (reducing) geochemical conditions in ground water at the Site and are consistent with the low DO measurements noted in the previous bullet.

- The field-measured pH values for purge water from the wells range from 6.15 in MW-3 to 6.34 in MW-6. These values indicate slightly acidic ground water, likely resulting from organic acids and carbon dioxide formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons.

- GRPH and BTEX compounds were not detected in any of the ground water samples collected during this quarterly sampling event.

- The sample from monitoring well MW-1 had a DRPH concentration of 1,100 µg/L. Although declining since November 2012, the DRPH concentration exceeds the MTCA Method A Ground Water CUL for DRPH of 500 µg/L. The sample from MW-1 also had a HRPH concentration of 290 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. Concentrations of both petroleum hydrocarbon ranges have decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event.

- The sample from MW-2 had a DRPH concentration of 280 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in this sample.

- The sample from MW-3 had a DRPH concentration of 140 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in this sample.

- The sample from MW-4 had a DRPH concentration of 200 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in this sample.

- The sample from MW-5 had a DRPH concentration of 56 µg/L, which is less than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in this sample.

- The sample from MW-6 had a DRPH concentration of 790 µg/L, which is greater than the MTCA Method A Ground Water CUL of 500 µg/L. HRPH was not detected in this sample.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly ground water monitoring report.

- Ground water samples from MW-1, MW-2, MW-3, and MW-4, have had no detectable concentrations of GRPH or BTEX compounds in the nine consecutive quarters of sampling performed since August 2011. This consistent record of non-detects indicates that residual gasoline impacts associated with the former 550-gallon UST removed in 1998 have been successfully remediated, likely as a result of source removal and natural attenuation. Two rounds of ground water samples from new wells MW-5 and MW-6 also have never had detectable concentrations of GRPH or BTEX compounds.

- EPI contacted Mr. Eugene Freeman of Ecology to request the discontinuation of GRPH and BTEX analyses for future sampling events at the Site. This request was based on the consistent nine consecutive quarters of analytical results demonstrating no detections for GRPH and BTEX and no detections for GRPH and BTEX in two rounds of samples from new wells MW-5 and MW-6. Mr. Freeman provided Ecology approval for this request via an email to EPI dated August 21, 2013.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Ground Water CUL for the past eight quarterly sampling events but have decreased to less than half of the greatest concentration of 2,700 µg/L in November 2012. The impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- HRPH concentrations in the sample from MW-1 have also decreased significantly from 1,200 µg/L in November 2012 to 290 µg/L in the current round. The decrease in HRPH concentrations in the samples from MW-1 appears to correspond to the decreases seen in DRPH concentrations in samples from MW-1 due to the apparent change in maintenance activity and parts storage practices at the northwest corner of the truck maintenance building. HRPH was not detected in samples from the other five wells.

- DRPH concentrations in samples from MW-2 have been consistently less than the MTCA Method A Ground Water CUL for every sampling event beginning in August 2011. There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining seven sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted ground water in the area near MW-2 are not warranted because no plume currently exists in this area.

- DRPH was also detected in samples from MW-3, MW-4, and new well MW-5 at concentrations significantly less than the Method A Ground Water CUL. Time trends for data from MW-3 and MW-4 suggest that DRPH concentrations are stable in samples from these wells. There are only two quarters of data from MW-5; therefore, it is premature to evaluate concentration trends for samples from MW-5.

- DRPH was detected in the samples from new well MW-6 at a concentration greater than the MTCA Method A CUL during the initial sampling in June 2013 and during the current quarterly event. There are only two quarters of data from MW-6; therefore, it is premature to evaluate the concentration trends for samples from MW-6.

Based on the historical and current sampling results, EPI recommends continuing the quarterly ground water monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Detections of DRPH in samples from MW-1, which is cross-gradient to the former waste oil tank, suggest that these impacts may be due to vehicle parking and engine parts storage outside the northwest corner of the building. These practices have been discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from all other wells continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for GRPH, BTEX, and HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH.

In an email dated July 22, 2013 Ecology required additional site data to evaluate the extent of the DRPH plume associated with the former 12,000-gallon UST that was decommissioned in November 2012. Ecology specifically required data to demonstrate that impacts did not extend to the property boundary and nearby Mill Creek to the east of the Site. EPI recommends performing a focused Phase II Environmental Site Assessment (Phase II ESA) to provide the data necessary to address Ecology's concerns regarding the lateral extent of ground water impacts downgradient of the former 12,000-gallon UST and MW-6.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

State of Washington
Hydrogeologist
260
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Ground Water Stabilization Parameters
Table 2 Quarterly Ground Water Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map
Figure 2 Site Representation

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1
Summary of Ground Water Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington
EPI Project 61901.0

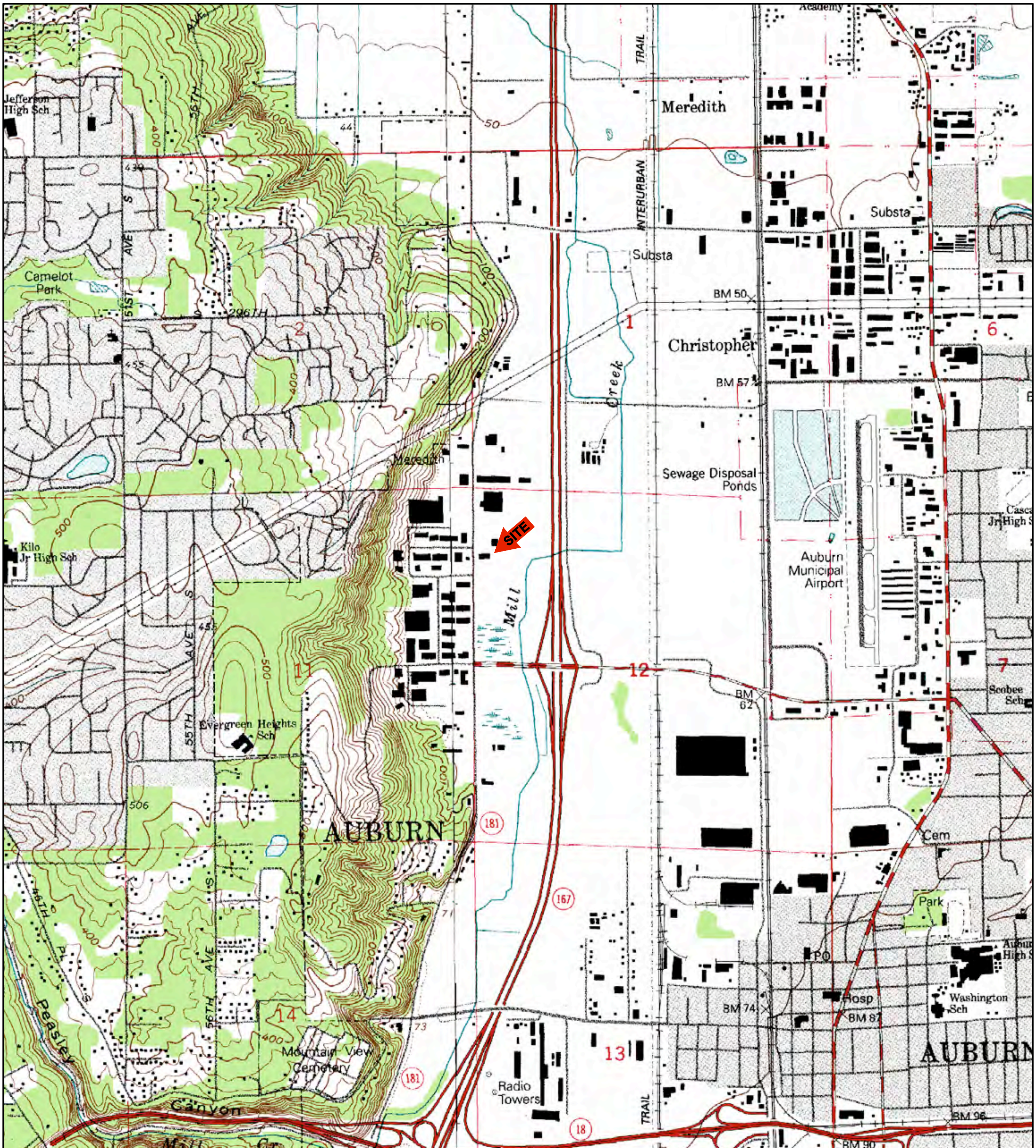
Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation (ft.)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	08/14/13	6.17	100.51	94.34	6.33	0.763	0.21	18.35	-72.3	0.70
MW-2	08/14/13	6.33	100.56	94.23	6.21	0.752	0.58	16.58	-35.5	7.91
MW-3	08/14/13	6.31	100.50	94.19	6.15	0.673	0.37	17.56	-22.9	7.21
MW-4	08/14/13	6.42	100.61	94.19	6.24	0.636	0.18	17.07	-34.2	5.13
MW-5	08/14/13	6.31	NM		6.26	0.562	0.21	18.19	-35.2	6.91
MW-6	08/14/13	6.21	NM		6.34	0.603	0.22	18.94	-60.2	38.7

Table 2: Quarterly Ground Water Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North, Auburn, WA

Sample ID	Date Sampled	GRPH[b]	DRPH[d]	HRPH[d]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
MTCA Method A Ground Water Cleanup Level (in µg/L)		**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
TOC - Top of casing
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Ground Water Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Ground Water Cleanup Level

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

epi ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	GAM	08/24/11

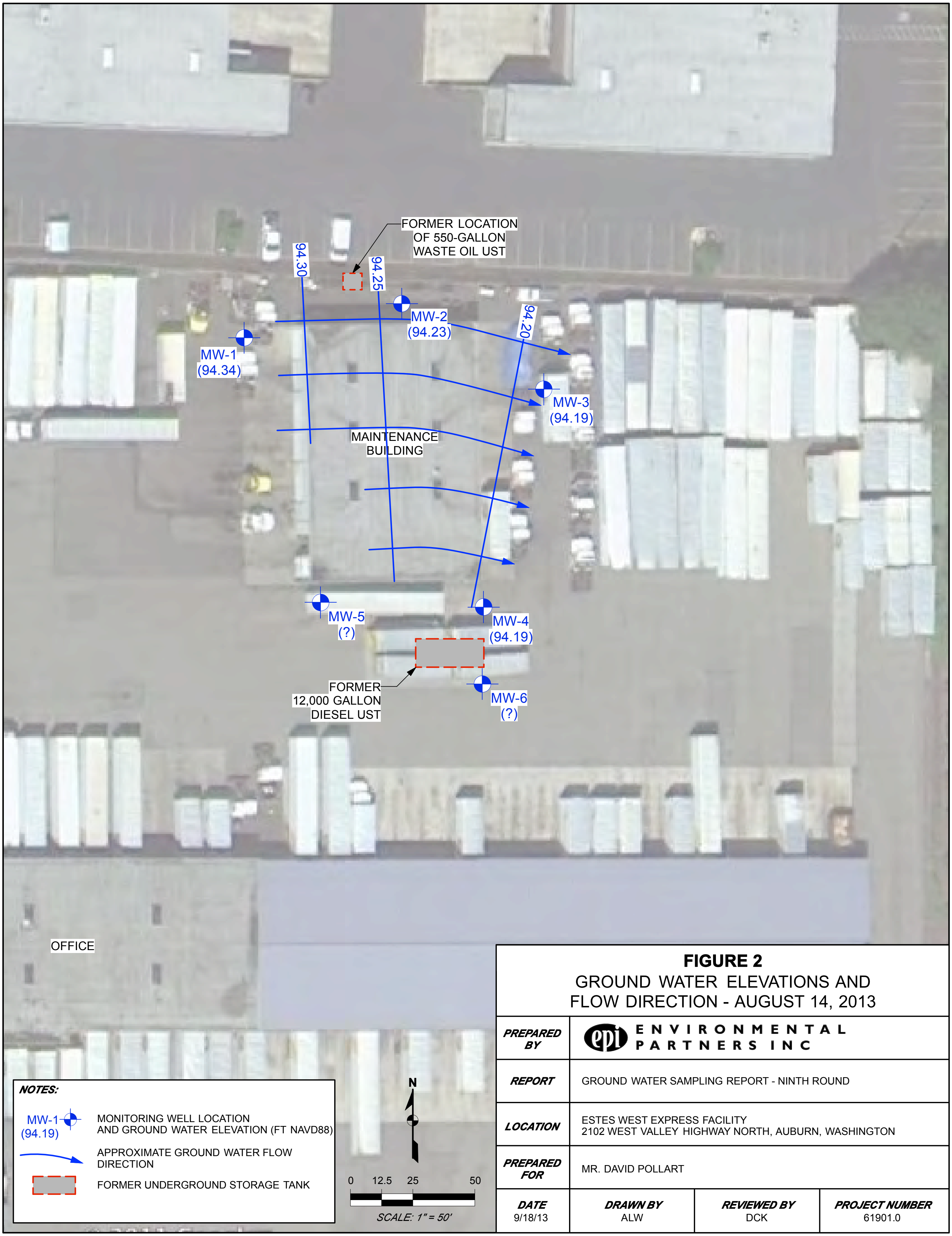


FIGURE 2
GROUND WATER ELEVATIONS AND FLOW DIRECTION - AUGUST 14, 2013

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	GROUND WATER SAMPLING REPORT - NINTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 9/18/13	***DRAWN BY*** ALW	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.0

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

June 11, 2013

Greg McCormick, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: Estes Express Auburn, WA

Dear Mr. McCormick:

Included are the results from the testing of material submitted on June 5, 2013 from the Estes Express Auburn, WA, F&BI 306066 project. There are 6 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
c: Cynthia Moon
EPI0611R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 5, 2013 by Friedman & Bruya, Inc. from the Environmental Partners Estes Express Auburn, WA, F&BI 306066 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
306066 -01	MW-5
306066 -02	MW-6

All quality control requirements were acceptable.

Date of Report: 06/11/13
Date Received: 06/05/13
Project: Estes Express Auburn, WA, F&BI 306066
Date Extracted: 06/06/13
Date Analyzed: 06/06/13 and 06/07/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-5 306066-01	<1	<1	<1	<3	<100	90
MW-6 306066-02	<1	<1	<1	<3	<100	88
Method Blank 03-1053 MB	<1	<1	<1	<3	<100	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/11/13
Date Received: 06/05/13
Project: Estes Express Auburn, WA, F&BI 306066
Date Extracted: 06/06/13
Date Analyzed: 06/06/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-5 306066-01	160 x	<250	101
MW-6 306066-02	680 x	<250	103
Method Blank 03-1073 MB2	<50	<250	101

Date of Report: 06/11/13
Date Received: 06/05/13
Project: Estes Express Auburn, WA, F&BI 306066

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

Laboratory Code: 306042-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	98	65-118
Toluene	ug/L (ppb)	50	98	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	92	69-134

Date of Report: 06/11/13
Date Received: 06/05/13
Project: Estes Express Auburn, WA, F&BI 306066

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	119	110	61-133	8

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

306066

SAMPLE CHAIN OF CUSTODY ME 06/05/13

V2/C03

Page # 1 of 1

Send Report To Greg McCormick

Company EPI

Address 295 NE Gilman Blvd #201

City, State, ZIP Issaquah, WA

Phone # (425) 395-0026 Fax # (425) 395-0011

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Estes Express Auburn, WA

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	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
MW-5	01 A-D	6/5/13	2:30	Water	4	X	X	X									
MW-6	02 A-D	6/5/13	3:00	Water	4	X	X	X									

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Greg McCormick	EPI	6/5/13	4:00
Received by: [signature]	HONG NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:		Samples received at 18 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 27, 2013

Doug Kunkel, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.0, F&BI 308228

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on August 14, 2013 from the 61901.0, F&BI 308228 project. There are 6 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
EPI0827R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 14, 2013 by Friedman & Bruya, Inc. from the Environmental Partners 61901.0, F&BI 308228 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
308228-01	MW-2
308228-02	MW-3
308228-03	MW-5
308228-04	MW-4
308228-05	MW-6
308228-06	MW-1

All quality control requirements were acceptable.

Date of Report: 08/27/13
Date Received: 08/14/13
Project: 61901.0, F&BI 308228
Date Extracted: 08/15/13
Date Analyzed: 08/15/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-2 308228-01	<1	<1	<1	<3	<100	96
MW-3 308228-02	<1	<1	<1	<3	<100	96
MW-5 308228-03	<1	<1	<1	<3	<100	95
MW-4 308228-04	<1	<1	<1	<3	<100	96
MW-6 308228-05	<1	<1	<1	<3	<100	96
MW-1 308228-06	<1	<1	<1	<3	<100	95
Method Blank 03-1603 MB	<1	<1	<1	<3	<100	95

Date of Report: 08/27/13
Date Received: 08/14/13
Project: 61901.0, F&BI 308228
Date Extracted: 08/15/13
Date Analyzed: 08/21/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-2 308228-01	280 x	<250	89
MW-3 308228-02	140 x	<250	83
MW-5 308228-03	56 x	<250	81
MW-4 308228-04	200 x	<250	80
MW-6 308228-05	790 x	<250	88
MW-1 308228-06	1,100 x	290 x	84
Method Blank 03-1598 MB	<50	<250	95

Date of Report: 08/27/13
Date Received: 08/14/13
Project: 61901.0, F&BI 308228

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

Laboratory Code: 308230-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	100	72-119
Toluene	ug/L (ppb)	50	100	71-113
Ethylbenzene	ug/L (ppb)	50	102	72-114
Xylenes	ug/L (ppb)	150	93	72-113
Gasoline	ug/L (ppb)	1,000	97	70-119

Date of Report: 08/27/13
Date Received: 08/14/13
Project: 61901.0, F&BI 308228

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	85	95	58-134	11

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

308228

SAMPLE CHAIN OF CUSTODY

ME 08/14/13 V2/C03

Page # 1 of 1

Send Report To Doug Kunkel

Company EPI

Address 295 NE Gilman Blvd, Ste 201

City, State, ZIP Issaquah, WA 98027

Phone # 425-395-0010 Fax # 425-395-0011

SAMPLERS (signature)

PROJECT NAME/NO. 61901.0

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-2	01 A-D	8/14/13	1000	Water	4	X	X	X										
MW-3	02		1038		4	X	X	X										
MW-5	03		1109		4	X	X	X										
MW-4	04		1144		4	X	X	X										
MW-6	05		1227		4	X	X	X										
MW-1	06		1302		4	X	X	X										

Samples received at 6 °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:	Monica Mogg	EPI	8/14/13	1640
Received by:	Jon Shimaza	FBI	8/14/13	16:46
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

January 8, 2014

Mr. David Pollart
P.O. Box 896
Seattle, WA 98111

Re: Groundwater Sampling Report - Tenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Groundwater Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the six on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) and an agreement made on August 21, 2013, the 10th round of groundwater sampling was modified to limit sampling to monitoring wells MW-1, MW-2, and MW-3. Analytical tests were reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events. On November 25, 2013 EPI sampled three of the monitoring wells at the Site as part of the current quarterly groundwater sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 94.40 feet Site Datum 2013 (EPI surveyed elevations) in MW-1 to 90.25 feet in MW-3 indicating groundwater flow was generally from west to east with a southeast groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 2. Previous groundwater flow directions at the site were generally from northwest to southeast. The groundwater gradient at the Site is so flat that minor changes in groundwater elevations and even normal measurement variability can affect the calculated groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 30-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected from wells for DRPH and HRPH using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include higher oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard chain-of-custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements were 0.29 milligrams per liter (mg/L) in purge water from MW-1, 0.27 mg/L from MW-2 and 0.41 mg/L from MW-3. The very low measured DO concentrations in purge water from the three wells sampled indicate anaerobic geochemical conditions.

- ORP measurements were -25.9 millivolts (mV) in purge water from MW-1, 18.2 mV from MW-2, and -38.9 mV from MW-3. The negative to low positive ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater at the Site and are consistent with the low DO measurements noted in the previous bullet.

- The field-measured pH values for purge water from the wells were 6.45 from MW-1, 6.20 from MW-2, and 6.26 from MW-3. These values indicate slightly acidic groundwater, likely resulting from organic acids and carbon dioxide and carbonic acid formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons.

- The sample from monitoring well MW-1 had a DRPH concentration of 1,400 µg/L. Although concentrations have generally declined since November 2012, the DRPH concentration exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. The sample from MW-1 also had a HRPH concentration of 400 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. Concentrations of both petroleum hydrocarbon ranges have decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event.

- The sample from MW-2 had a DRPH concentration of 53 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample.

- The sample from MW-3 had a DRPH concentration of 170 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample.

A chemist from Friedman & Bruya, the analytical laboratory, contacted EPI and noted that the DRPH chromatographs for the samples from MW-1 through MW-3 appeared to indicate the presence of polar hydrocarbons that are not petroleum-based hydrocarbons. The presence of non-petroleum hydrocarbons in soil or groundwater is common in soil with abundant organics such as peat, plant debris, and wood. The Site is located in a former heavily vegetated marsh environment with abundant buried plants and thick root zones providing organic material that can release polar hydrocarbons into groundwater as they decay. The presence of these non-petroleum polar hydrocarbons can result in false positive analytical results for DRPH and HRPH.

Ecology formerly allowed laboratories to perform a silica gel cleanup step to remove polar hydrocarbons prior to analysis and reduce the potential for false positives. Unfortunately, silica gel cleanup can also remove polar hydrocarbons that might be present in weathered diesel fuel, which would cause an underreporting of the DRPH concentration. As a result, Ecology does not currently accept DRPH and HRPH data as being valid if silica gel cleanup was performed except in site-specific cases. However, because there is a concern that some of the reported DRPH and HRPH results might be attributable to non-petroleum polar hydrocarbons we elected to re-run the MW-1 sample using silica gel cleanup.

MW-1 sample results with silica gel cleanup performed prior to analysis are 71 µg/L for DRPH and <250 µg/L for HRPH (non-detect). These data are not included in Table 2 and are not part of the data evaluations summarized in this report. They are presented here for consideration and further discussion with Ecology.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Groundwater CUL for the past nine quarterly sampling events but have decreased to approximately half of the greatest concentration of 2,700 μg/L in November 2012. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- HRPH concentrations in the sample from MW-1 have been less than the MTCA Method A Groundwater CUL for the past three consecutive quarterly monitoring events. The decrease in HRPH concentrations in the samples from MW-1 appears to correspond to the apparent change in maintenance activity and parts storage practices at the northwest corner of the truck maintenance building. HRPH was not detected in samples from the other wells sampled during this quarterly monitoring event.

- DRPH concentrations in samples from MW-2 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 μg/L in August 2012 and 260 μg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted because no plume currently exists in this area.

- DRPH concentrations in samples from MW-3 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- HRPH has never been detected in samples from MW-3.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Detections of DRPH in samples from MW-1, which is upgradient to cross-gradient to the former waste oil tank, suggest that these impacts may be due to vehicle parking and engine parts storage outside the northwest corner of the building. These practices have been discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from other wells continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Groundwater Stabilization Parameters
Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map
Figure 2 Site Representation, Groundwater Elevations, and Flow Directions

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Trucking Facility
2102 West Valley Highway North, Auburn, WA

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation[1]	Groundwater Elevation[1]	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	11/25/13	5.06	95.46	90.40	6.45	0.851	0.29	14.70	-25.9	0.67
MW-2	11/25/13	5.14	95.52	90.38	6.20	0.254	0.27	12.98	18.2	20.3
MW-3	11/25/13	5.22	95.47	90.25	6.26	1.146	0.41	14.78	-28.9	3.13
MW-4	11/25/13	5.31	95.61	90.30	NS	NS	NS	NS	NS	NS
MW-5	11/25/13	5.24	95.58	90.34	NS	NS	NS	NS	NS	NS
MW-6	11/25/13	5.13	95.44	90.31	NS	NS	NS	NS	NS	NS

NS = Temporarily Not Sampled per agreement with Ecology.

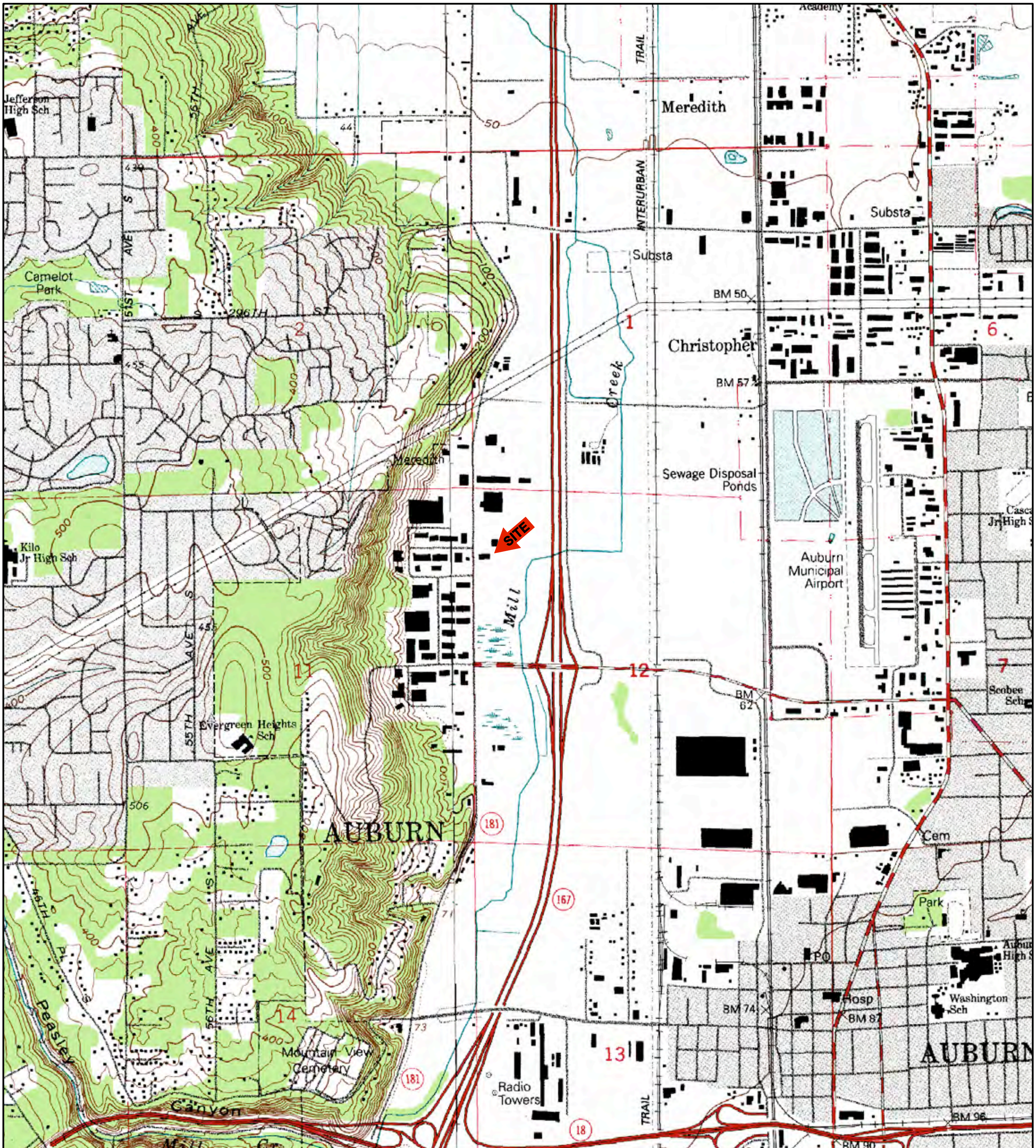
[1] Elevation datum is top of bollard at northwest corner of the maintenance building.

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North, Auburn, WA

Sample ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[(d)]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in ground water and 1,000 µg/L when benzene is not present
NA = Not Analyzed
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

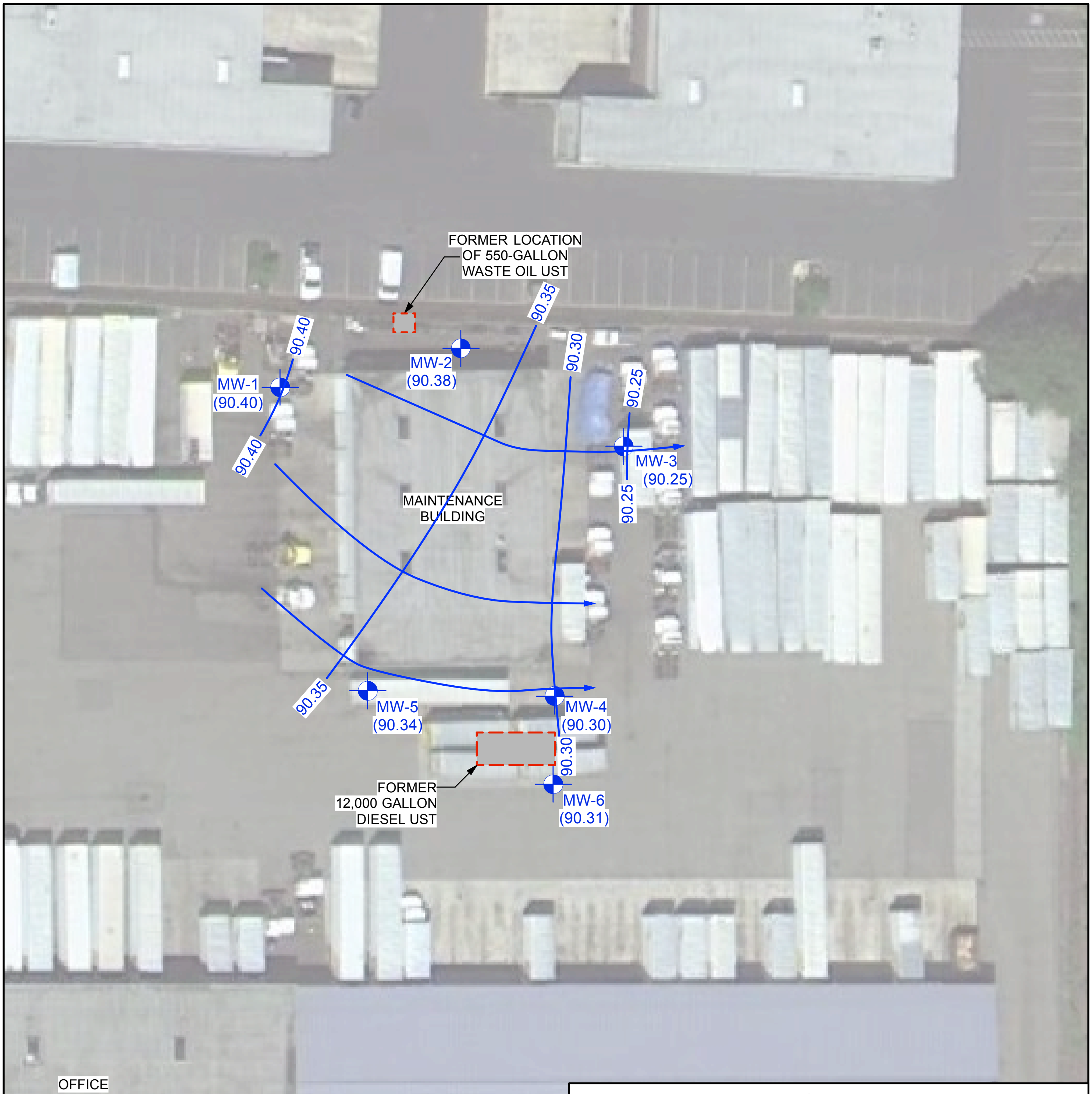
ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	61901.0
PREPARED FOR	MR. DAVID POLLART
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON

SHEET	**DRAWN BY**	**REVIEWED BY**	**DATE**
1 of 1	ARM	GAM	08/24/11



NOTES:

MW-1 (90.40)	MONITORING WELL LOCATION AND NOVEMBER 25, 2013 WATER LEVEL ELEVATION
	APPROXIMATE GROUNDWATER FLOW DIRECTION
	GROUNDWATER ELEVATION CONTOUR
	FORMER UNDERGROUND STORAGE TANK

N

0 12.5 25 50

SCALE: 1" = 50'

FIGURE 2

SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
01/06/14	ARM	DCK	61901.3

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
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fbi@isomedia.com
www.friedmanandbruya.com

December 12, 2013

Doug Kunkel, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.1, F&BI 311483

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on November 25, 2013 from the 61901.1, F&BI 311483 project. There are 6 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
EPI1212R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 25, 2013 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 311483 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
311483-01	MW-3
311483-02	MW-2
311483-03	MW-1

All quality control requirements were acceptable.

Date of Report: 12/12/13
Date Received: 11/25/13
Project: 61901.1, F&BI 311483
Date Extracted: 11/26/13
Date Analyzed: 11/26/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-3 311483-01	170 x	<250	79
MW-2 311483-02	53 x	<250	89
MW-1 311483-03	1,400 x	400 x	67
Method Blank 03-2460 MB	<50	<250	75

Date of Report: 12/12/13
Date Received: 11/25/13
Project: 61901.1, F&BI 311483
Date Extracted: 11/26/13
Date Analyzed: 12/06/13

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

Sample Extracts Passed Through a Silica Gel Column Prior to Analysis

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-1 311483-03	71 x	<250	84
Method Blank 03-2460 MB	<50	<250	99

Date of Report: 12/12/13
Date Received: 11/25/13
Project: 61901.1, F&BI 311483

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 Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	84	87	58-134	4

Date of Report: 12/12/13
Date Received: 11/25/13
Project: 61901.1, F&BI 311483

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	85	98	58-134	14

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

311483

SAMPLE CHAIN OF CUSTODY

ME 11/25/13

B03

Page # 1 of 1

Send Report To Doug Kunkel

Company EPI

Address 195 NE Gilman Blvd, Ste. 201

City, State, ZIP Issaquah, WA

Phone # 425-395-0010 Fax # 425-395-0011

SAMPLERS (signature)

PROJECT NAME/NO. 61901.1

PO#

REMARKS

dougk@epi-wa.com

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Dx w/SG						Notes
MW-3	01 A-B	11/25/13	1204	W	2	X												* per DK 12/4/13
MW-2	02	↓	1244	↓	2	X												ME
MW-1	03	↓	1310	↓	2	X						*						

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:	Monica Mogg	EPI	11/25/13	1430
Received by:	Nhan Phan	FeBI	11/25/13	1430
Relinquished by:				
Received by:		Samples received at 14 °C		

FORMS\COC\COC.DOC

E N V I R O N M E N T A L P A R T N E R S I N C 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

April 16, 2014

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: Groundwater Sampling Report - Eleventh Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Groundwater Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the six on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) and an agreement made on August 21, 2013, the 11th round of groundwater sampling was modified to limit sampling to monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6. Analytical tests were reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events. On February 20, 2014 EPI sampled five of the monitoring wells at the Site as part of the current quarterly groundwater sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 93.29 feet Site Datum (EPI 2013 surveyed elevations) in MW-2 to 91.13 feet in MW-3. The depth to water measurement for MW-2 appeared to be anomalous and, as a result, it was not included as part of the groundwater elevation contour map. Groundwater elevation contours indicate that groundwater flow was generally from west to east with a southeast groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 2. The horizontal groundwater gradient at the Site is so flat that minor changes in groundwater elevations and even normal measurement variability can affect the apparent groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 30-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include higher oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of $4^{o}C$ or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.25 milligrams per liter (mg/L) in purge water from MW-1, to 3.08 mg/L in purge water from MW-2, which is anomalous relative to other wells and the historical record of DO data for MW-2. The low measured DO concentrations in purge water from all wells except MW-2 indicate anaerobic (reducing) geochemical conditions. The higher measured DO concentration from MW-2 indicates that surface water might have entered the well or leaked through the asphalt pavement at that location, which would explain the anomalous depth to water and DO measurements.

- ORP measurements ranged from -60.9 millivolts (mV) in purge water from MW-6 to 68.7 mV in MW-2, which is likely an anomalous measurement as noted in the preceding bullet. The negative to low positive ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater at the Site and are consistent with the low DO measurements noted in the previous bullet.

- The field-measured pH values for purge water from the wells ranged from 6.44 in MW-6 to 6.24 in MW-1. These values indicate slightly acidic groundwater, likely resulting from organic acids and carbon dioxide and carbonic acid formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons in the aquifer.

- The sample from monitoring well MW-1 had a DRPH concentration of 700 µg/L. Although concentrations have generally declined since November 2012, the DRPH concentration exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. The sample from MW-1 also had a HRPH concentration of 280 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. Concentrations of both petroleum hydrocarbon ranges have decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event.

- Neither DRPH nor HRPH were detected in the sample from MW-2.

- The sample from MW-3 had a DRPH concentration of 160 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample.

- MW-4 had a DRPH concentration of 140 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this samples.

- The sample from MW-6 had a DRPH concentration of 740 µg/L, which exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. HRPH was not detected in this sample.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Groundwater CUL for the last 10 quarterly sampling events but have decreased to approximately one quarter of the greatest concentration of 2,700 µg/L that was detected in November 2012. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event and concentrations remain relatively consistent over three sampling events.

- HRPH concentrations in the sample from MW-1 have been less than the MTCA Method A Groundwater CUL for the past four consecutive quarterly monitoring events. The decrease in HRPH concentrations in the samples from MW-1 appears to correspond to the apparent change in maintenance activity and parts storage practices at the northwest corner of the truck maintenance building. HRPH was not detected in samples from the other wells sampled during this quarterly monitoring event.

- DRPH concentrations in samples from MW-2, MW-3 and MW-4 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted because no plume currently exists in this area.

- HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Detections of DRPH in samples from MW-1, which is upgradient to cross-gradient to the former waste oil tank, suggest that these impacts may be due to vehicle parking and engine parts storage outside the northwest corner of the building. These practices have been discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from other wells continue to have concentrations less than the MTCA

Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1	Summary of Groundwater Stabilization Parameters
Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Site Representation, Groundwater Elevations, and Flow Directions

Attachment

Attachment A	Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters

Estes West Express Facility

2102 West Valley Highway North, Auburn, Washington

EPI Project 61901.0

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm2)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	02/20/14	3.62	95.46	91.84	6.24	0.557	0.25	9.49	47.7	1.46
MW-2	02/20/14	2.23	95.52	93.29	6.34	0.479	3.08	9.07	68.7	9.22
MW-3	02/20/14	4.34	95.47	91.13	6.28	1.221	0.26	10.71	-31.7	2.74
MW-4	02/20/14	4.45	95.61	91.16	6.38	0.839	0.37	11.15	-53.9	1.43
MW-5	02/20/14	4.38	95.58	91.20	NS	NS	NS	NS	NS	NS
MW-6	02/20/14	4.27	95.44	91.17	6.44	1.162	0.29	11.79	-60.9	2.76

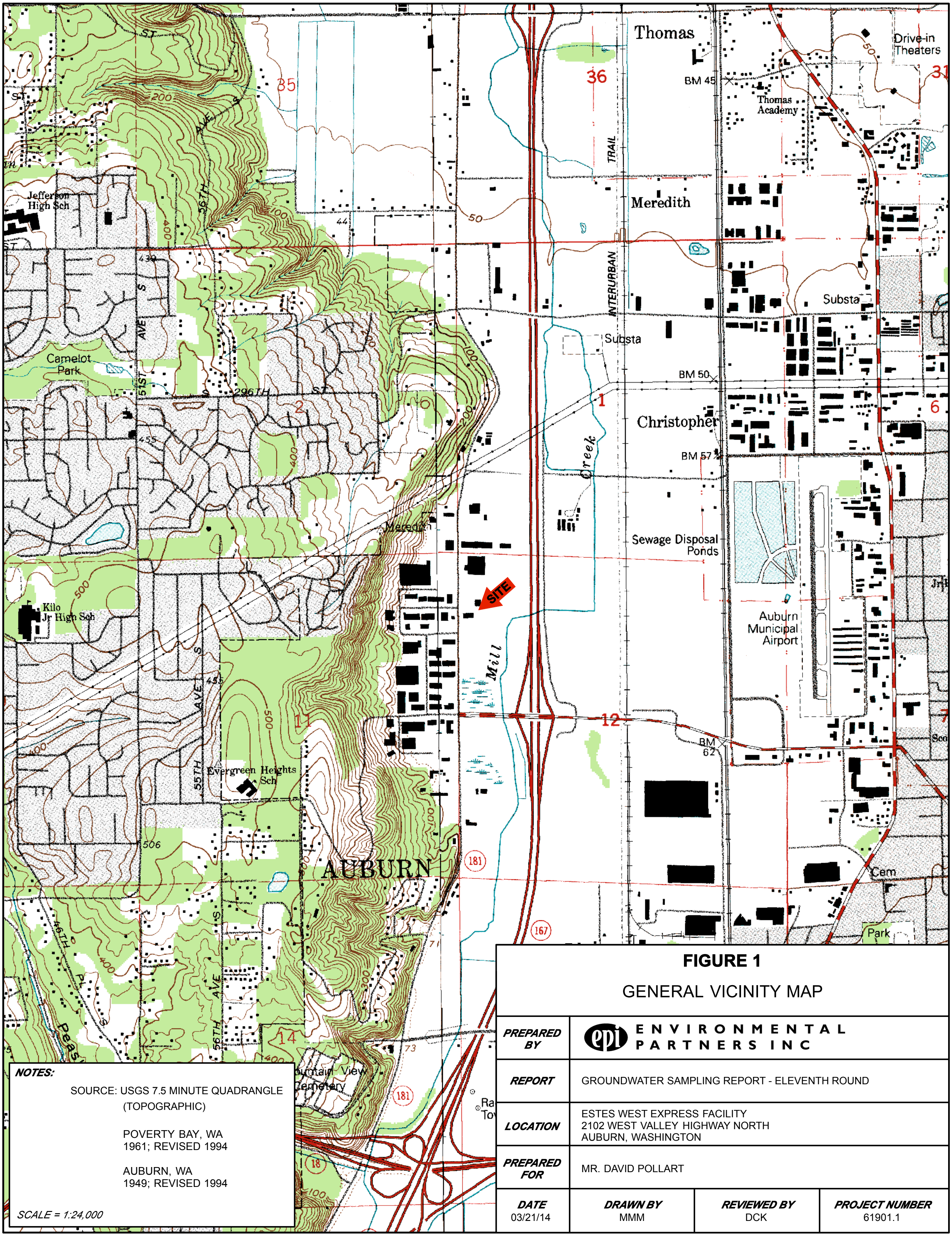
NS = Temporarily not sampled per Agreement with Ecology

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH(b)	DRPH(d)	HRPH(d)	Benzene(c)	Toluene(c)	Ethylbenzene(c)	Total Xylenes(c)
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000(e)**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - ELEVENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
03/21/14	MMM	DCK	61901.1

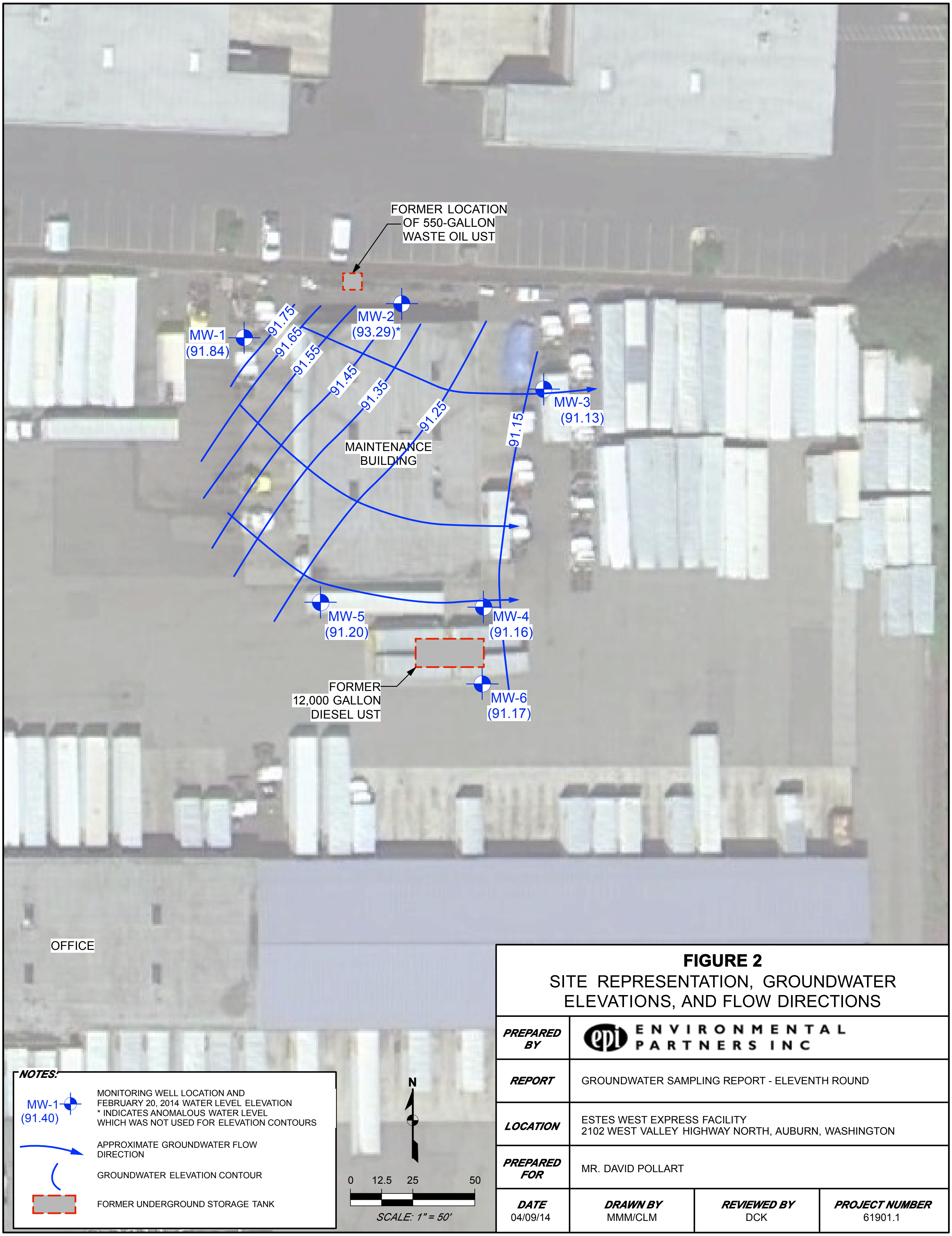


FIGURE 2

SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - ELEVENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
04/09/14	MMM/CLM	DCK	61901.1

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

February 27, 2014

Doug Kunkel, Project Manager
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

RE: 61901.1, F&BI 402294

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on February 21, 2014 from the 61901.1, F&BI 402294 project. There are 4 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
EPI0227R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 21, 2014 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 402294 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
402294-01	MW-4
402294-02	MW-6
402294-03	MW-3
402294-04	MW-2
402294-05	MW-1
402294-06	DUP-1

All quality control requirements were acceptable.

Date of Report: 02/27/14
Date Received: 02/21/14
Project: 61901.1, F&BI 402294
Date Extracted: 02/24/14
Date Analyzed: 02/24/14

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-4 402294-01	140	<250	115
MW-6 402294-02	740	<250	115
MW-3 402294-03	160	<250	107
MW-2 402294-04	<50	<250	110
MW-1 402294-05	700	280 x	93
DUP-1 402294-06	820	350 x	109
Method Blank 04-394 MB	<50	<250	115

Date of Report: 02/27/14
Date Received: 02/21/14
Project: 61901.1, F&BI 402294

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	105	104	58-134	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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

402294 ME 02-21-14 C04

SAMPLE CHAIN OF CUSTODY

Send Report To ~~Doug Kunkel~~

Company Environmental Partners, Inc.

Address 295 NE Gilman Blvd.

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature)	
PROJECT ID/ADDRESS 61901	JOB #
SITE NAME	REMARKS

PAGE # ___ OF 1

TURNAROUND TIME

- [x] Standard
- [ ] 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	Matrix	# of jars	8015 - GRO	8015 - DRO	BTEX by 8021B	BTEX by 602	VOC by 8260C	VOC by 524	NWTPH-Dx				Notes
MW-4	01	2/20/14	0836	H_2O	1							X				
MW-6	02		0905		1							X				
MW-3	03		0931		1							X				
MW-2	04		1045		1							X				
MW-1	05		1110		1							X				
DUP-1	06		—		1							X				

Samples received at 1°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:	Monica Moga	EPI	2/21/14	7:45AM
Received by:	Michael Erdahl	F&B Inc	↓	↓
Relinquished by:				
Received by:				

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

June 17, 2014

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: Groundwater Sampling Report - Twelfth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Groundwater Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (μg/L) and a benzene concentration of 12.0 μg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 μg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 μg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) and an agreement made on August 21, 2013, and further clarified by email on May 22, 2014, the 12th round of groundwater sampling was modified to limit sampling to monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6. Analytical tests were reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events. On May 15, 2014 EPI sampled five of the monitoring wells at the Site as part of the current quarterly groundwater sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 90.70 feet Site Datum (EPI 2013 surveyed elevations) in MW-1 to 90.44 feet in MW-3. Groundwater elevation contours indicate that groundwater flow was generally from west to east with a southeast groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 2. The horizontal groundwater gradient at the Site is so flat that minor changes in groundwater elevations including normal measurement variability can affect the apparent groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include higher oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of $4^{o}C$ or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.12 milligrams per liter (mg/L) in purge water from MW-2, to 0.77 mg/L in purge water from MW-3. The low measured DO concentrations in purge water from the wells indicate anaerobic (reducing) geochemical conditions.

- ORP measurements ranged from -3.7 millivolts (mV) in purge water from MW-2 to -104.5 mV in purge water from MW-6. The negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater at the Site and are consistent with the low DO measurements noted in the previous bullet.

- The field-measured pH values for purge water from the wells ranged from 5.81 in purge water from MW-1 to 6.53 in purge water from MW-2. These values indicate slightly acidic groundwater, likely resulting from organic acids and carbon dioxide and carbonic acid formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons in the aquifer.

- The sample from monitoring well MW-1 had a DRPH concentration of 940 µg/L. Concentrations have generally declined since November 2012; however, the DRPH concentration continues to exceed the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. HRPH was not detected in the sample from MW-1. Concentrations of both petroleum hydrocarbon ranges have decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event.

- Neither DRPH nor HRPH were detected in the sample from MW-2.

- The sample from MW-3 had a DRPH concentration of 120 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-3.

- The sample from MW-4 had a DRPH concentration of 140 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-4.

- The sample from MW-6 had a DRPH concentration of 950 µg/L, which exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-6.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- DRPH concentrations in samples from MW-1 have exceeded the Method A Groundwater CUL for the last 11 quarterly sampling events but have decreased to approximately 35% of the greatest concentration of 2,700 µg/L that was detected in November 2012. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event and the concentration in May increased relative to the previous three sampling events.

- HRPH was not detected in the sample from MW-1. The decrease in HRPH concentrations in the samples from MW-1 appears to correspond to the apparent change in maintenance activity and parts storage practices at the northwest corner of the truck maintenance building. HRPH was not detected in samples from the other wells sampled during this quarterly monitoring event.

- DRPH concentrations in samples from MW-2, MW-3, and MW-4 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted because no petroleum hydrocarbon plume currently exists in this area.

- HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Detections of DRPH in samples from MW-1, which is upgradient to cross-gradient of the former waste oil tank, suggest that these impacts may be due to vehicle parking and engine parts storage outside the northwest corner of the building. These practices have been discontinued and the latest sampling results indicate a significant decrease in both DRPH and HRPH concentrations in samples from MW-1. Samples from other wells continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH.

EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen to the groundwater. Each of the wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set to be fully submerged at 14 to 15-ft bgs, which will force the injected air into groundwater as microbubbles, increasing the surface area of the bubbles for more efficient oxygenation. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

A new appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement.

The system was tested and started on May 15, 2014 after quarterly sampling was completed. Data from the next sampling event, tentatively scheduled for August, will be the first indication of the effectiveness of the system. If this technology and remedial approach is effective at MW-1 the system can be expanded to remediate groundwater at MW-6.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Groundwater Stabilization Parameters
Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map
Figure 2 Site Representation, Groundwater Elevations, and Flow Directions

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters

Estes West Express Facility

2102 West Valley Highway North, Auburn, Washington

EPI Project 61901.0

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm2)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	05/15/14	4.76	95.46	90.70	5.81	0.367	0.41	15.22	-77.8	1.92
MW-2	05/15/14	4.86	95.52	90.66	6.53	0.089	0.12	12.64	-3.7	58.1
MW-3	05/15/14	5.03	95.47	90.44	6.11	0.724	0.77	13.44	-80.7	1.76
MW-4	05/15/14	5.14	95.61	90.47	6.20	0.619	0.45	13.60	-96.1	1.77
MW-5*	05/15/14	5.06	95.58	90.52	6.16	0.447	0.29	14.34	-84.6	3.78
MW-6	05/15/14	4.97	95.44	90.47	5.88	0.557	0.33	15.88	-104.5	2.92

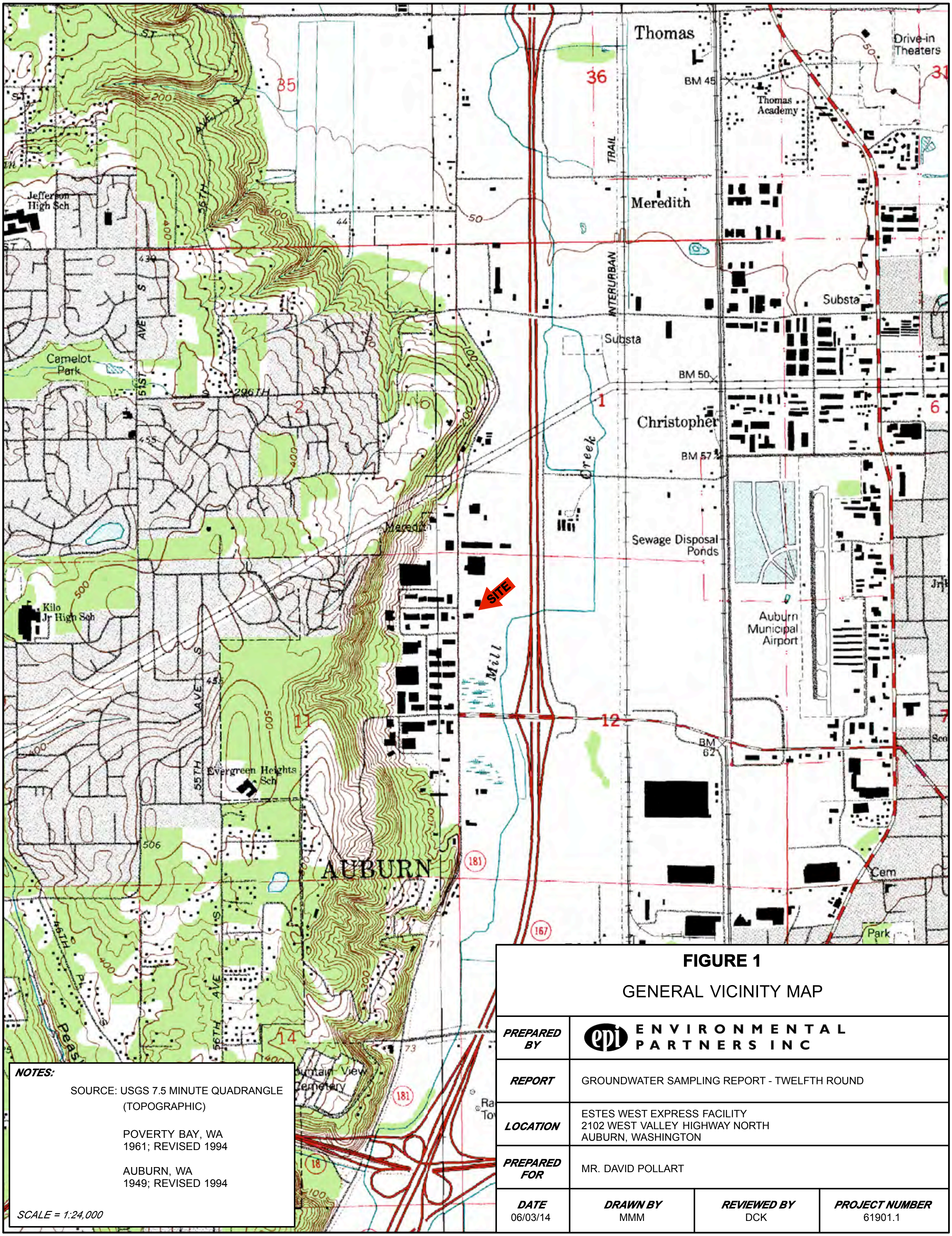
* = Temporarily not sampled per Agreement with Ecology

Table 2: Quarterly Groundwater Monitoring Analytical Results in μg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[b]	DRPH[d]	HRPH[d]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in μg/L)		**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 μg/L when benzene is present in groundwater and 1,000 μg/L when benzene is not present
NA - Not analyzed
Sample analysis performed by Friedman & Bruya, Inc.
μg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TWELFTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
06/03/14	MMM	DCK	61901.1

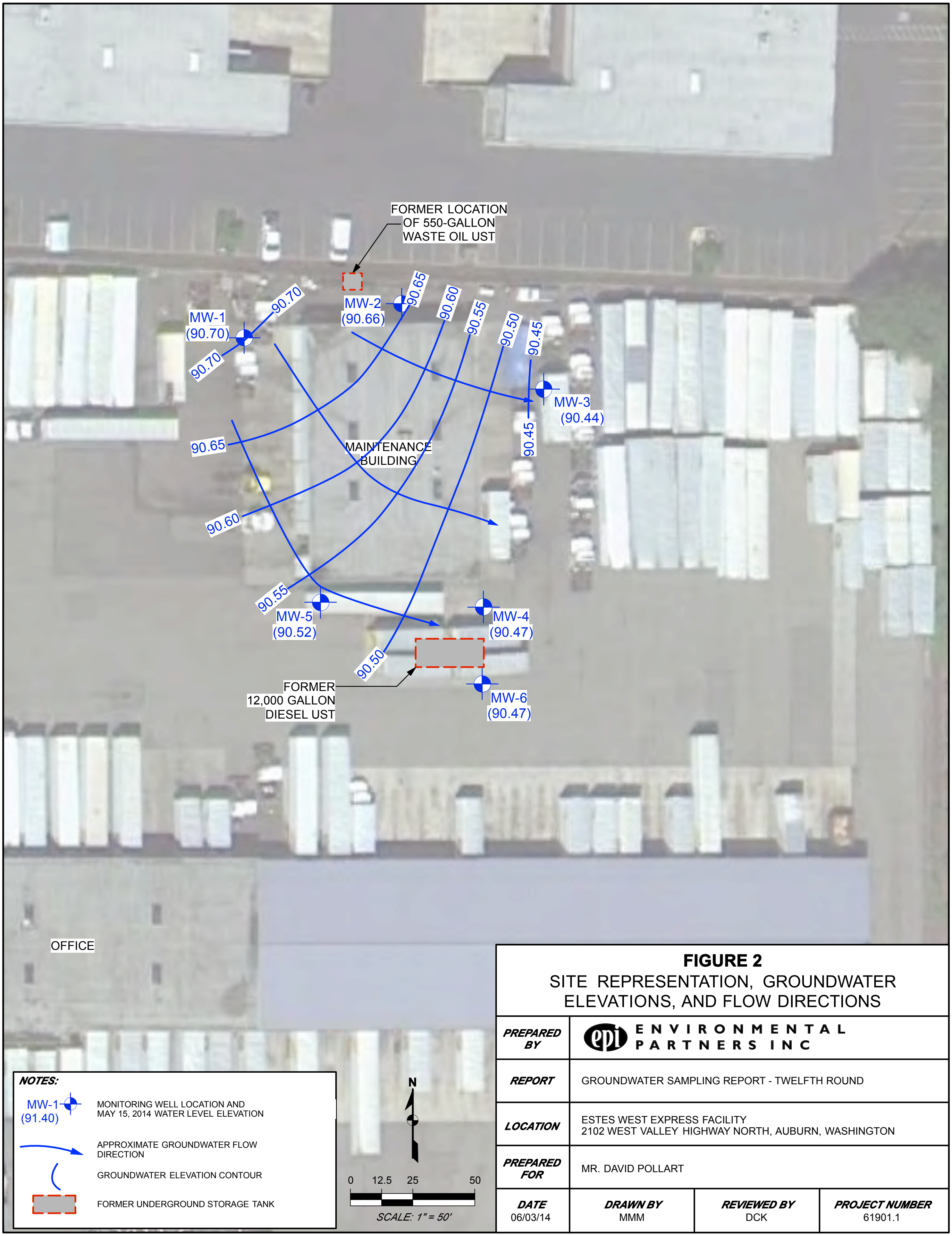


FIGURE 2
SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	GROUNDWATER SAMPLING REPORT - TWELFTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 06/03/14	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 27, 2014

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1, F&BI 405316

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on May 16, 2014 from the 61901.1, F&BI 405316 project. There are 4 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
EPI0527R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2014 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 405316 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
405316-01	MW-3
405316-02	MW-4
405316-03	MW-5
405316-04	MW-6
405316-05	MW-2
405316-06	MW-1

All quality control requirements were acceptable.

Date of Report: 05/27/14
Date Received: 05/16/14
Project: 61901.1, F&BI 405316
Date Extracted: 05/21/14
Date Analyzed: 05/22/14

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 41-152)
MW-3 405316-01	120 x	<250	116
MW-4 405316-02	140 x	<250	106
MW-6 405316-04	950 x	<250	102
MW-2 405316-05	<50	<250	105
MW-1 405316-06	940 x	<250	112
Method Blank 04-1021 MB	<50	<250	91

Date of Report: 05/27/14
Date Received: 05/16/14
Project: 61901.1, F&BI 405316

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	91	93	63-142	2

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.

405316

[redacted]

SAMPLE CHAIN OF CUSTODY

5/16/14 ME E04

Send Report To

Company Environmental Partners, Inc.

Address ~~295 NE Gilman Blvd.~~ 1180 NW Maple, Ste 310

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature)	
PROJECT ID/ADDRESS 61901.1	JOB #
SITE NAME Estes/Pollart	REMARKS

PAGE # [redacted]

TURNAROUND TIME

- ☒ Standard
- ☐ 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	Matrix	# of jars	8015 - GRO	8015 - DRO	BTEX by 8021B	BTEX by 602	VOC by 8260C	VOC by 524					Notes
MW-3	01	5/15/14	1011	W	1		X									
MW-4	02		1041		1		X									
MW-5	03		1108		1		X									HOLD
MW-6	04		1148		1		X									
MW-2	05		1231		1		X									
MW-1	06		1304		1		X									

Samples [redacted] 4 °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:	Monica Mogg	EPI	5/16/14	7:45
Received by:	Michael Erdahl	F&B		
Relinquished by:				
Received by:				

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

November 7, 2014

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: Groundwater Sampling Report – Thirteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Groundwater Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater will stimulate population growth of aerobic bacteria and provide the oxygen necessary for those bacteria to metabolize the dissolved petroleum hydrocarbons in groundwater.

Each of the shallow injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces the injected air into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

A new appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement.

The system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) and an agreement made on August 21, 2013, and further clarified by email on August 4, 2014, the 13th round of groundwater sampling was modified to limit sampling to monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6. Analytical tests were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events. On August 14, 2014 EPI sampled five of the monitoring wells at the Site as part of the current quarterly groundwater sampling program.

EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 88.14 feet Site Datum (EPI 2013 surveyed elevations) in MW-1 to 90.59 feet in MW-2.

The water level measured in MW-1 appears to be anomalous relative to historical data and was not used to calculate groundwater elevation contours in Figure 2. MW-1 is the well closest to the three shallow air injection wells and although EPI powered down the air injection system prior to groundwater elevation measurements and sampling, the water level at MW-1 was likely experiencing residual effects of system operation.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast with a southern groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 2. The horizontal groundwater gradient at the Site is so flat that minor differences in groundwater elevations including those due to normal measurement variability can affect the apparent groundwater flow direction. Additionally, the implementation of the air injection system at the Site may have affected groundwater elevations during the sampling event.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.20 milligrams per liter (mg/L) in purge water from MW-6, to 7.69 mg/L in purge water from MW-1. The low measured DO concentrations in purge water from most of the wells indicate anaerobic (reducing) geochemical conditions. The high measured DO concentrations in the purge water from MW-1 demonstrate that the air injection system installed to increase the DO in the groundwater near MW-1 is working as intended.

- ORP measurements ranged from -35.6 millivolts (mV) in purge water from MW-6 to 158.8 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater throughout most of the Site and are consistent with the low DO measurements noted in the previous bullet. The positive ORP measured in MW-1 indicates favorable aerobic conditions have been achieved by the air injection system.

- The field-measured pH values for purge water from the wells ranged from 4.54 in purge water from MW-1 to 6.44 in purge water from MW-6. These values indicate slightly acidic groundwater, likely resulting from organic acids and carbon dioxide and carbonic acid formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons in the aquifer. The lowest pH measurement is at well MW-1, which is likely caused by increased generation of carbon dioxide from accelerated bacterial decomposition. This is a temporary condition resulting from successful operation of the remediation system.

- DRPH and HRPH were not detected in the sample from monitoring well MW-1. Concentrations of both petroleum hydrocarbon ranges decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event. This result indicates that the shallow air injection system installed and operated upgradient of MW-1 obtained the intended result.

- The sample from MW-2 had a DRPH concentration of 100 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample from MW-2.

- The sample from MW-3 had a DRPH concentration of 140 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-3.

- The sample from MW-4 had a DRPH concentration of 290 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-4.

- The sample from MW-6 had a DRPH concentration of 1,200 µg/L, which exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-6.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- DRPH and HRPH were not detected in the sample from MW-1. This represents the first monitoring event since August 2011 in which the sample from MW-1 did not exceed the Method A Groundwater CUL. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner. The installation and operation of the shallow air injection near MW-1 appears to have significantly decreased the concentrations of DRPH and HRPH in MW-1 to levels below their reporting limits.

- DRPH concentrations in samples from MW-2, MW-3, and MW-4 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event and the August concentration increased relative to the previous sampling events.

- HRPH was not detected in samples from any of the wells sampled during this quarterly monitoring event. HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted because no petroleum hydrocarbon plume currently exists in this area.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Samples from wells MW-2, MW-3, and MW-4 continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH. EPI anticipates that continued monitoring will demonstrate four consecutive quarters of compliance with MTCA Method A Cleanup Levels for data from MW-1.

Based on the positive response of the groundwater field parameters DO and ORP and the significant decrease in concentrations of DRPH and HRPH in the sample from MW-1, EPI recommends expanding the shallow air injection system to remediate groundwater near MW-6.EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Groundwater Stabilization Parameters
Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map
Figure 2 August 14, 2014 Groundwater Elevations, and Flow Directions

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington
EPI Project 61901.0

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm^2)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	08/14/14	7.32	95.46	88.14	4.54	1.600	7.69	19.42	158.8	0.46
MW-2	08/14/14	4.93	95.52	90.59	5.51	0.301	0.36	18.63	59.8	3.02
MW-3	08/14/14	6.28	95.47	89.19	6.24	0.646	0.29	17.04	-9.8	5.56
MW-4	08/14/14	6.33	95.61	89.28	6.21	0.672	0.27	16.29	-32.3	2.33
MW-5*	08/14/14	6.31	95.58	89.27	--	--	--	--	--	--
MW-6	08/14/14	6.13	95.44	89.31	6.44	0.516	0.20	18.42	-35.6	8.17

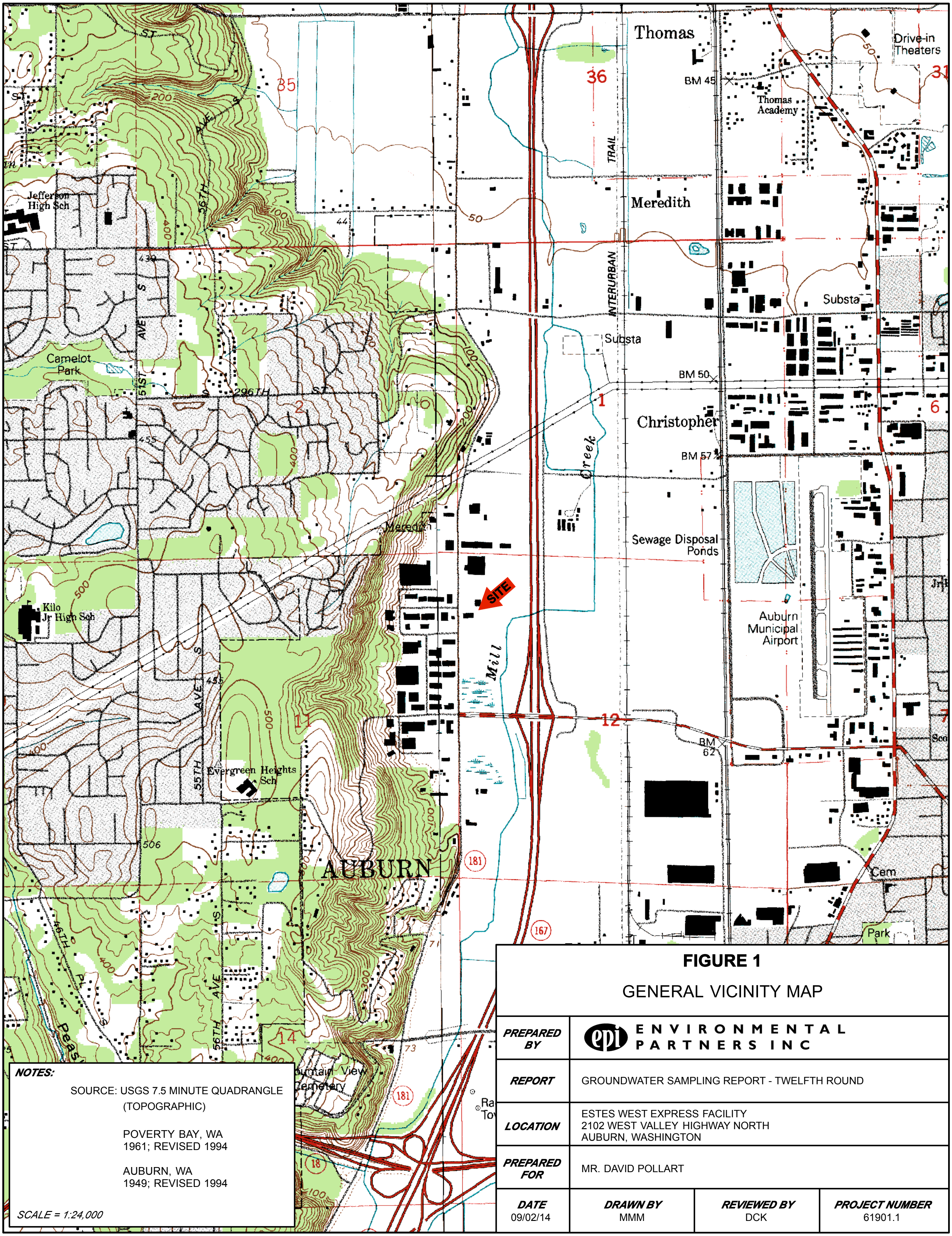
* = Temporarily not sampled per Agreement with Ecology

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH(b)	DRPH(d)	HRPH(d)	Benzene(c)	Toluene(c)	Ethylbenzene(c)	Total Xylenes(c)
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000(e)**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Vertical datum NAVD 88
(b) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Analyzed using EPA Method 8021B
(d) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(e) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
Sample analysis performed by Friedman & Bruya, Inc.
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

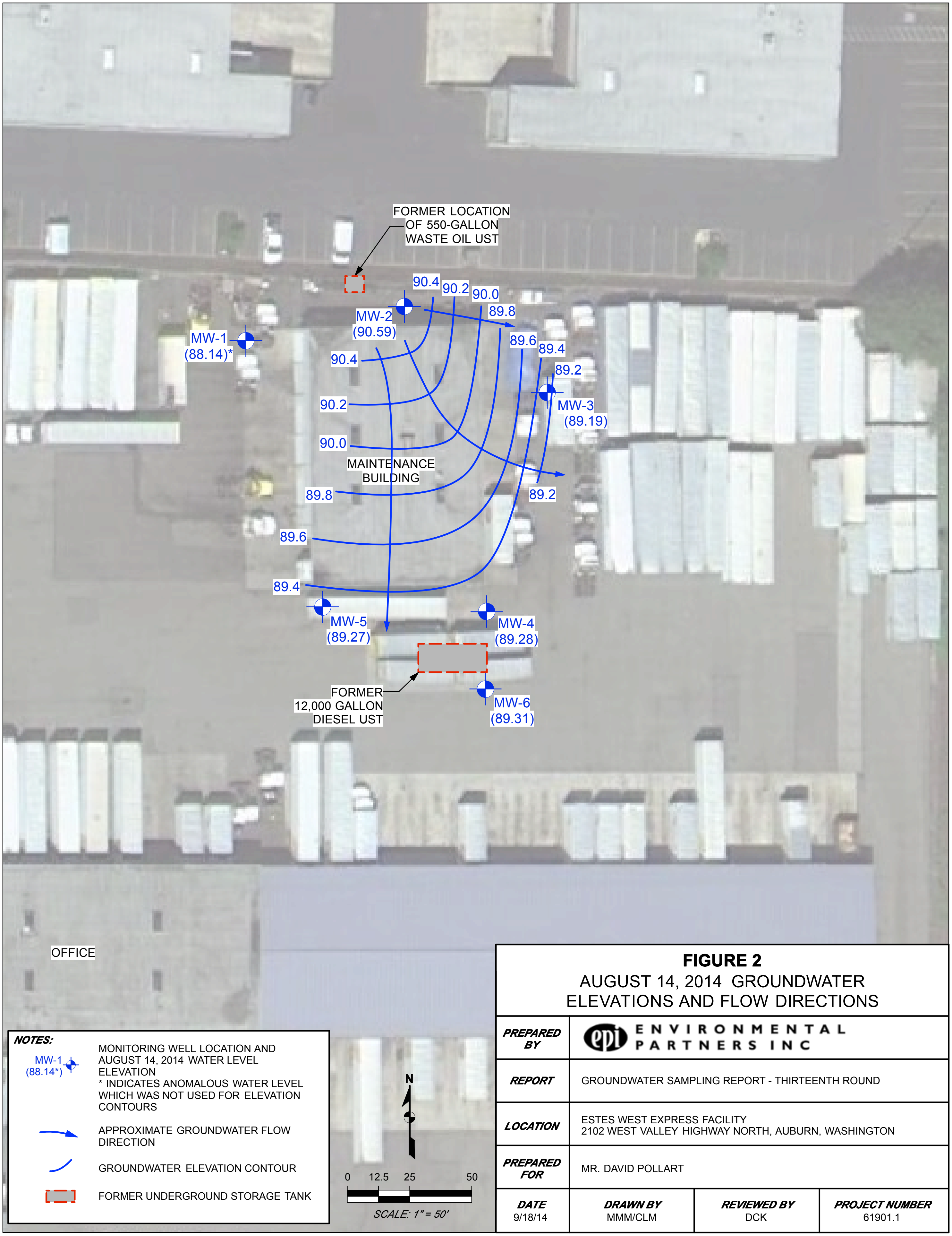
SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TWELFTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
09/02/14	MMM	DCK	61901.1



NOTES:

MW-1 (88.14*)	MONITORING WELL LOCATION AND AUGUST 14, 2014 WATER LEVEL ELEVATION * INDICATES ANOMALOUS WATER LEVEL WHICH WAS NOT USED FOR ELEVATION CONTOURS
	APPROXIMATE GROUNDWATER FLOW DIRECTION
	GROUNDWATER ELEVATION CONTOUR
	FORMER UNDERGROUND STORAGE TANK

0 12.5 25 50

SCALE: 1" = 50'

FIGURE 2

AUGUST 14, 2014 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - THIRTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
9/18/14	MMM/CLM	DCK	61901.1

Attachment A
Analytical Laboratory Report

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

August 21, 2014

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1, F&BI 408250

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on August 15, 2014 from the 61901.1, F&BI 408250 project. There are 4 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
c: Cynthia Moon
EPI0821R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 15, 2014 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 408250 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
408250-01	MW-2
408250-02	MW-3
408250-03	MW-4
408250-04	MW-6
408250-05	MW-1

All quality control requirements were acceptable.

Date of Report: 08/21/14
Date Received: 08/15/14
Project: 61901.1, F&BI 408250
Date Extracted: 08/18/14
Date Analyzed: 08/19/14

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-2 408250-01	100	<250	90
MW-3 408250-02	140	<250	111
MW-4 408250-03	290	<250	99
MW-6 408250-04	1,200	<250	104
MW-1 408250-05	<50	<250	109
Method Blank 04-1698 MB	<50	<250	90

Date of Report: 08/21/14
Date Received: 08/15/14
Project: 61901.1, F&BI 408250

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	87	91	58-134	4

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.

408250

SAMPLE CHAIN OF CUSTODY

ME 08/15/14

Page # 1 of 1 C05

Send Report To Doug Kunkel

Company Environmental Partners, Inc.

Address 1180 NW Maple St, Ste 310

City, State, ZIP Issaquah, WA 98027

Phone # 425-395-0010 Fax # 425-395-0011

SAMPLERS (signature)

PROJECT NAME/NO. 61901.1

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS								Notes
MW-2	01	8/14/14	1129	W	1	X													
MW-3	02	↓	1159	↓	1	X													
MW-4	03	↓	1223	↓	1	X													
MW-6	04	↓	1251	↓	1	X													
MW-1	05	↓	1327	↓	1	X													
																			Samples received at 5 °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:	Monica Mogg	EPI	8/15/14	8:00
Received by:	Michael Erdahl	FS Bine	↓	↓
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC 1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

December 30, 2014

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: Groundwater Sampling Report – Fourteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *Groundwater Sampling Report* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater will stimulate population growth of aerobic bacteria and provide the oxygen necessary for those bacteria to metabolize the dissolved petroleum hydrocarbons in groundwater.

Each of the shallow injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces the injected air into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

A new appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement.

The system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) the 14th round of groundwater sampling would include sampling all monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. Analytical tests were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On November 24, 2014 EPI sampled all six onsite monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 90.24 feet Site Datum (EPI 2013 surveyed elevations) in MW-1 to 91.82 feet in MW-2.

The water level measured in MW-1 appears to be anomalous relative to historical data and was not used to calculate groundwater elevation contours in Figure 2. MW-1 is the well closest to the three shallow air injection wells and although EPI powered down the air injection system prior to groundwater elevation measurements and sampling, the water level at MW-1 was likely experiencing residual effects of system operation.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast with a southern groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 2. The horizontal groundwater gradient at the Site is so flat that minor differences in groundwater elevations including those due to normal measurement variability can affect the apparent groundwater flow direction. Additionally, the implementation of the air injection system at the Site may have affected groundwater elevations during the sampling event.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.04 milligrams per liter (mg/L) in purge water from MW-4, to 0.67 mg/L in purge water from MW-1. The low measured DO concentrations in purge water from most of the wells indicate anaerobic (reducing) geochemical conditions. The higher measured DO concentrations in the purge water from MW-1 demonstrate that the air injection system installed to increase the DO in the groundwater near MW-1 is working as intended.

- ORP measurements ranged from -51.7 millivolts (mV) in purge water from MW-6 to 139.7 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater throughout most of the Site and are consistent with the low DO measurements noted in the previous bullet. The positive ORP measured in MW-1 indicates favorable aerobic conditions have been achieved by the air injection system.

- The field-measured pH values for purge water from the wells ranged from 4.78 in purge water from MW-1 to 6.01 in purge water from MW-6. These values indicate slightly acidic groundwater, likely resulting from organic acids and carbon dioxide and carbonic acid formed during bacterial decomposition of organic materials such as plant debris and petroleum hydrocarbons in the aquifer. The lowest pH measurement is at well MW-1, which is likely caused by increased generation of carbon dioxide from accelerated bacterial decomposition. This is a temporary condition resulting from successful operation of the remediation system.

- HRPH was not detected in the sample from monitoring well MW-1. DRPH was detected in the sample from MW-1 at a concentration of 220 μg/L, which is lower than the MTCA Method A Cleanup Level of 500 μg/L. Concentrations of both petroleum hydrocarbon ranges decreased significantly since their greatest concentrations, which were noted during the November 2012 sampling event. This result indicates that the shallow air injection system installed and operated upgradient of MW-1 obtained the intended result.

- DRPH and HRPH were not detected in the sample from MW-2. HRPH has not been detected in samples from MW-2 since February 2013.

- The sample from MW-3 had a DRPH concentration of 130 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-3.

- The sample from MW-4 had a DRPH concentration of 290 µg/L, which is less than the MTCA Method A Groundwater CUL of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-4.

- DRPH and HRPH were not detected in the sample from MW-5. HRPH has never been detected in samples from MW-5.

- The sample from MW-6 had a DRPH concentration of 680 µg/L, which exceeds the MTCA Method A Groundwater CUL for DRPH of 500 µg/L. HRPH was not detected in this sample and has never been detected in samples from MW-6.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- HRPH was not detected and DRPH was at detected at a concentration less than half the MTCA Method A Cleanup Level in the sample from MW-1. This represents the second consecutive monitoring event since August 2011 in which the sample from MW-1 did not exceed the Method A Groundwater CUL. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner. The installation and operation of the shallow air injection near MW-1 appears to have significantly decreased the concentrations of DRPH and HRPH in MW-1 to levels below their reporting limits.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event and the November 2014 concentration decreased relative to previous sampling events.

- HRPH was not detected in samples from any of the wells sampled during this quarterly monitoring event. HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedence of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted because no petroleum hydrocarbon plume currently exists in this area.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Samples from wells MW-2, MW-3, MW-4, and MW-5 continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH. EPI anticipates that continued monitoring will demonstrate four consecutive quarters of compliance with MTCA Method A Cleanup Levels for data from MW-1.

EPI is currently expanding the shallow air injection system to remediate groundwater near MW-6. The air injection system planned for MW-6 will be similar to the air injection system installed and operated near MW-1 and will be operated in a similar manner.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Groundwater Stabilization Parameters

Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map

Figure 2 November 24, 2014 Groundwater Elevations, and Flow Directions

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

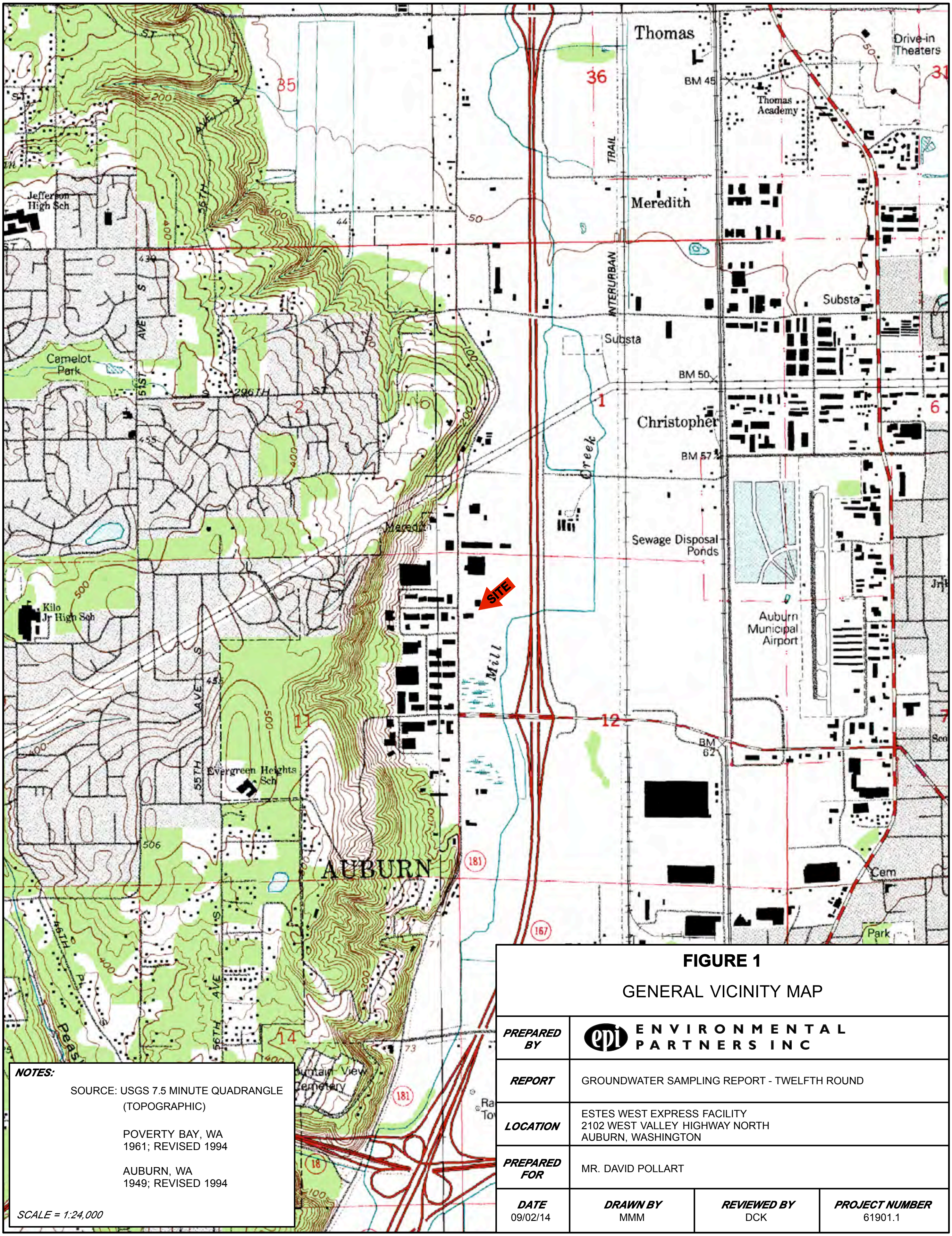
Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	11/24/14	5.22	95.46	90.24	4.78	0.787	0.67	16.11	139.7	0.84
MW-2	11/24/14	3.70	95.52	91.82	5.68	0.288	0.14	13.86	75	23.1
MW-3	11/24/14	5.21	95.47	90.26	5.92	0.649	0.05	15.26	-26.3	5.13
MW-4	11/24/14	5.27	95.61	90.34	5.91	0.697	0.04	14.74	-41.7	1.97
MW-5	11/24/14	5.24	95.58	90.34	5.92	0.488	0.08	15.42	-20.2	4.98
MW-6	11/24/14	5.08	95.44	90.36	6.01	0.548	0.09	16.92	-51.7	4.33

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[d]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TWELFTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
09/02/14	MMM	DCK	61901.1

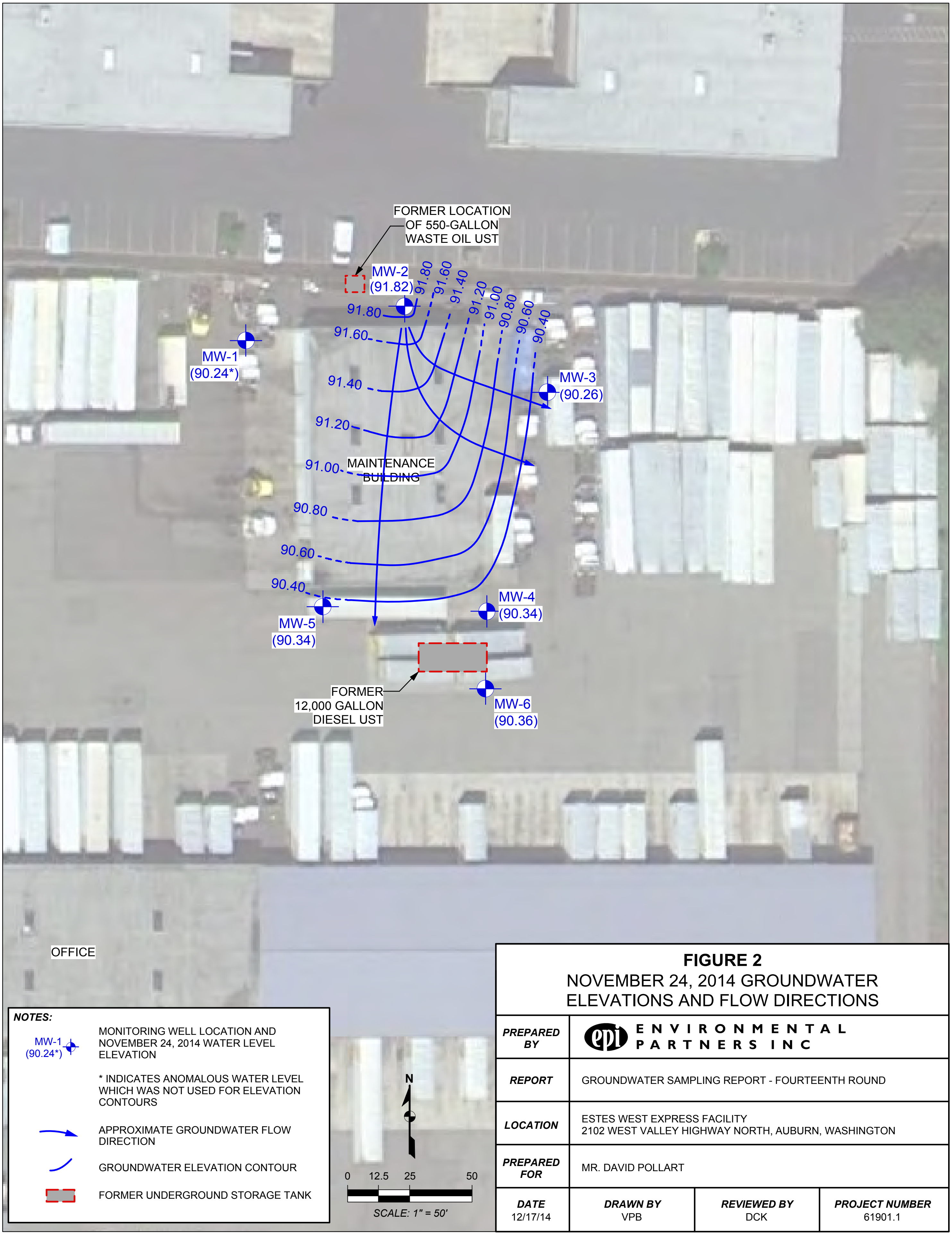


FIGURE 2
NOVEMBER 24, 2014 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	GROUNDWATER SAMPLING REPORT - FOURTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 12/17/14	DRAWN BY VPB	REVIEWED BY DCK	PROJECT NUMBER 61901.1

Attachment A
Analytical Laboratory Report

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 5, 2014

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on November 25, 2014 from the 61901.1, F&BI 411428 project. There are 4 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
EPI1205R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 25, 2014 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 411428 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
411428 -01	MW-2
411428 -02	MW-5
411428 -03	MW-3
411428 -04	MW-4
411428 -05	MW-6
411428 -06	MW-1

All quality control requirements were acceptable.

Date of Report: 12/05/14
Date Received: 11/25/14
Project: 61901.1, F&BI 411428
Date Extracted: 12/01/14
Date Analyzed: 12/01/14

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 41-152)
MW-2 411428-01	<50	<250	91
MW-5 411428-02	<50	<250	99
MW-3 411428-03	130 x	<250	97
MW-4 411428-04	290 x	<250	101
MW-6 411428-05	680 x	<250	102
MW-1 411428-06	220 x	<250	100
Method Blank 04-2404 MB	<50	<250	92

Date of Report: 12/05/14
Date Received: 11/25/14
Project: 61901.1, F&BI 411428

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	106	63-142	9

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.

411428

[redacted]

SAMPLE CHAIN OF CUSTODY

ME 11/25/14 D04

[redacted] Page # 1 of 1

Send Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St, Ste 310

City, State, ZIP Issaquah, WA 98027

Phone # 425 395 0010 Fax # 425 395 0011

SAMPLERS (signature)	
PROJECT NAME/NO. 61901.1	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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
MW 2	01	11/24/14	1207	W	1	X												
MW-5	02	↓	1240	↓	1	X												
MW-3	03	↓	1302	↓	1	X												
MW-4	04	↓	1327	↓	1	X												
MW-6	05	↓	1349	↓	1	X												
MW-1	06	↓	1425	↓	1	X												
																	Samples received at 5 °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:	Monica Mogg	EPI	11/25/14	0800
Received by:	Tasnim Rehamani	Fedex Office	11/25/14	10:10am
Relinquished by:				
Received by:	Jon Shikuza	FBI	11/25/14	11:45

FORMS\COC\COC.DOC

May 8, 2015

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: March 2015 Groundwater Sampling Report – Fifteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *March 2015 Groundwater Sampling Report – Fifteenth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to develop an appropriate strategy for achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site (also referred to as Provisioners Express) re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained above MTCA CULs and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater will stimulate population growth of aerobic bacteria and provide the oxygen necessary for those bacteria to metabolize the dissolved petroleum hydrocarbons in groundwater.

Each of the shallow injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces the injected air into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

A new appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that GRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained turned off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater has been remediated to concentrations below MTCA Method A Groundwater Cleanup Levels.

The success of the air injection remediation system at MW-1 warranted expansion of the system to remediate impacted groundwater at MW-6. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was turned on and tested on April 3, 2015. The expanded system has been running continuously at MW-6 since April 3, 2015.

The locations of air injection wells and air supply piping for the remediation systems at MW-1 and MW-6 are shown in Figure 2.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) the 15th round of groundwater sampling would include sampling all monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. Analytical tests were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On March 31, 2015 EPI sampled all six onsite monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 90.32 feet Site Datum (EPI 2013 surveyed elevations) in MW-3 to 90.50 feet in MW-2.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast with a southern groundwater flow component under the western half of the maintenance building at the time of the sampling event as shown in Figure 3. The horizontal groundwater gradient at the Site is so flat that minor differences in groundwater elevations including those due to normal measurement variability can affect the apparent groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^oC or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment A.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment A.

- DO measurements ranged from 0.09 milligrams per liter (mg/L) in purge water from MW-6, to 2.12 mg/L in purge water from MW-2. The low measured DO concentrations in purge water from most of the wells indicate anaerobic (reducing) geochemical conditions.

- ORP measurements ranged from -53.2 millivolts (mV) in purge water from MW-3 to 74.2 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater throughout most of the Site and are consistent with the low DO measurements noted in the previous bullet. ORP measurements for MW-1 and MW-2 are positive indicating more aerobic geochemical conditions, likely resulting from previous operation of the air injection system near MW-1 and MW-2.

- The field-measured pH values for purge water from the wells ranged from 5.84 in purge water from MW-1 to 6.29 in purge water from MW-4. The low pH value measured at well MW-1 is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics at MW-1. The carbon dioxide generated by this process likely forms a weak carbonic acid in the localized groundwater near the air injection system upgradient of MW-1.

- HRPH was not detected in any of the samples collected since February 2014 when HRPH was detected below the MTCA Method A Cleanup Level of 500 μg/L in monitoring well MW-1.

- DRPH was detected in all of the samples collected from the monitoring wells during the March 2015 sampling event. The concentrations of DRPH did not exceed the MTCA Method A Cleanup Level of 500 μg/L in any of the samples collected from monitoring wells MW-1 through MW-5. The sample from MW-6 had a DRPH concentration of 750 μg/L, which exceeds the MTCA Method A Groundwater CUL.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- HRPH was not detected and DRPH was at detected at a concentration below the MTCA Method A Cleanup Level in the sample from MW-1. This represents the third consecutive monitoring event since August 2014 in which the sample from MW-1 did not exceed a Method A Groundwater CUL. The DRPH impacts, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner. The installation and operation of the shallow air injection near MW-1 appears to have significantly decreased the concentrations of DRPH and HRPH in samples from MW-1 to levels below their MTCA Method A Cleanup Levels.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event and the March 2015 concentration appeared to remain relatively consistent with the previous sampling events.

- HRPH was not detected in samples from any of the wells sampled during this quarterly monitoring event. HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedance of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted.

Based on the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical tests reduced to DRPH and HRPH by Method NWTPH-Dx. Samples from wells MW-1, MW-2, MW-3, MW-4, and MW-5 continue to have concentrations less than the MTCA Method A CUL for DRPH and non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH and consistent non-detections for HRPH. EPI anticipates that continued monitoring will demonstrate four consecutive quarters of compliance with MTCA Method A Cleanup Levels for data from MW-1.

EPI expanded the shallow air injection system to remediate groundwater near MW-6. The air injection system at MW-6 is similar to the air injection system installed and operated near MW-1 and will be operated in a similar manner.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1 Summary of Groundwater Stabilization Parameters
Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1 General Vicinity Map
Figure 2 Air Injection Remediation System Layout
Figure 3 March 31, 2015 Groundwater Elevations, and Flow Directions

Attachment

Attachment A Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters

Estes West Express Facility

2102 West Valley Highway North, Auburn, Washington

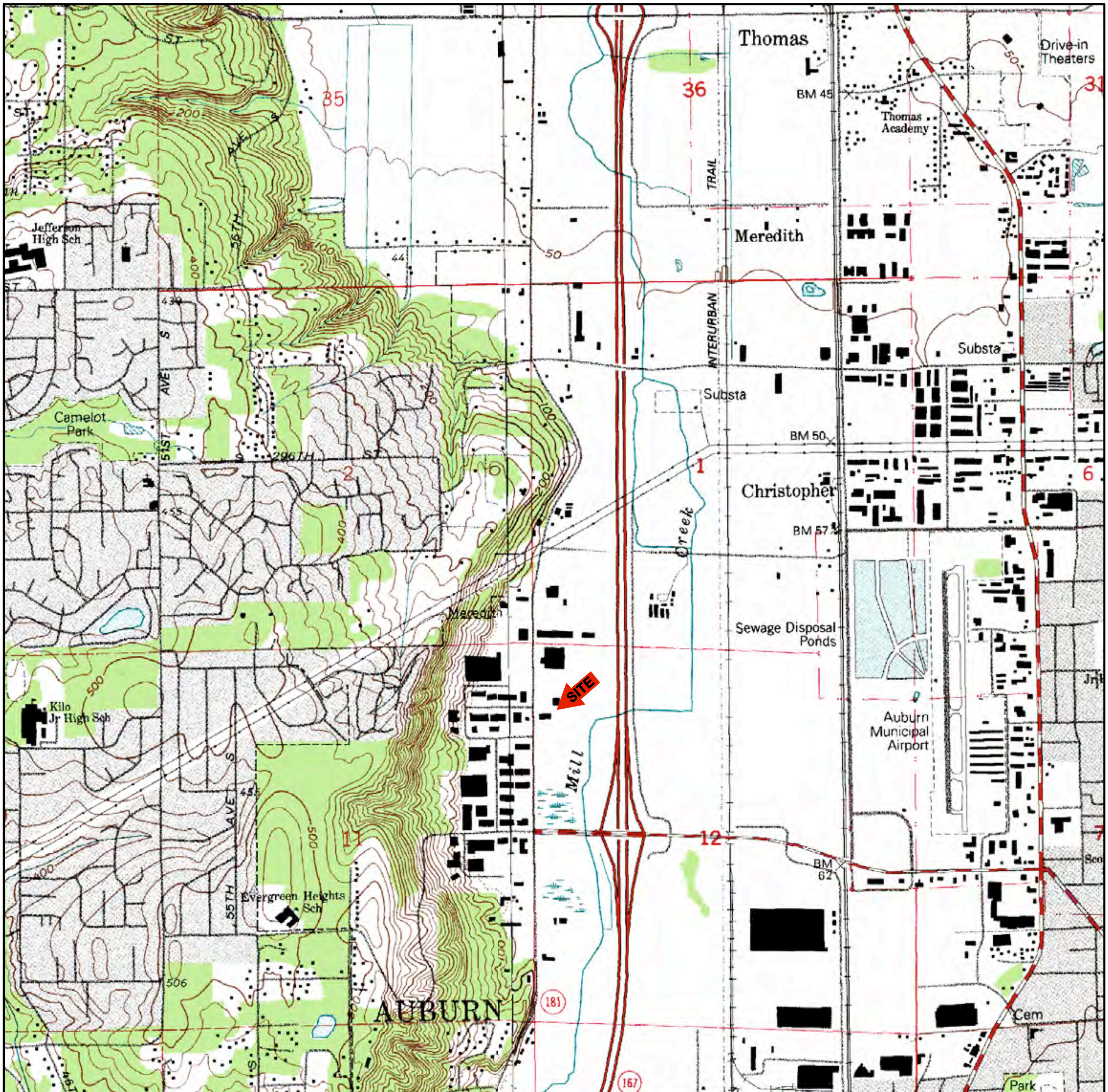
Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	03/31/15	4.99	95.46	90.47	5.84	0.339	0.45	12.64	74.2	0.22
MW-2	03/31/15	5.02	95.52	90.5	6.10	0.119	2.12	11.62	46.7	29.7
MW-3	03/31/15	5.15	95.47	90.32	6.26	0.675	1.24	12.71	-53.2	1.25
MW-4	03/31/15	5.27	95.61	90.34	6.29	0.658	0.98	12.38	-49.3	2.31
MW-5	03/31/15	5.17	95.58	90.41	6.25	0.435	1.09	13.09	-51	9.02
MW-6	03/31/15	5.10	95.44	90.34	6.01	0.548	0.09	16.92	-51.7	4.33

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250				
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250				
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250				
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250				
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250				
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[(d)]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	MARCH 2015 GROUNDWATER SAMPLING REPORT - FIFTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
04/15/15	MMM	DCK	61901.1

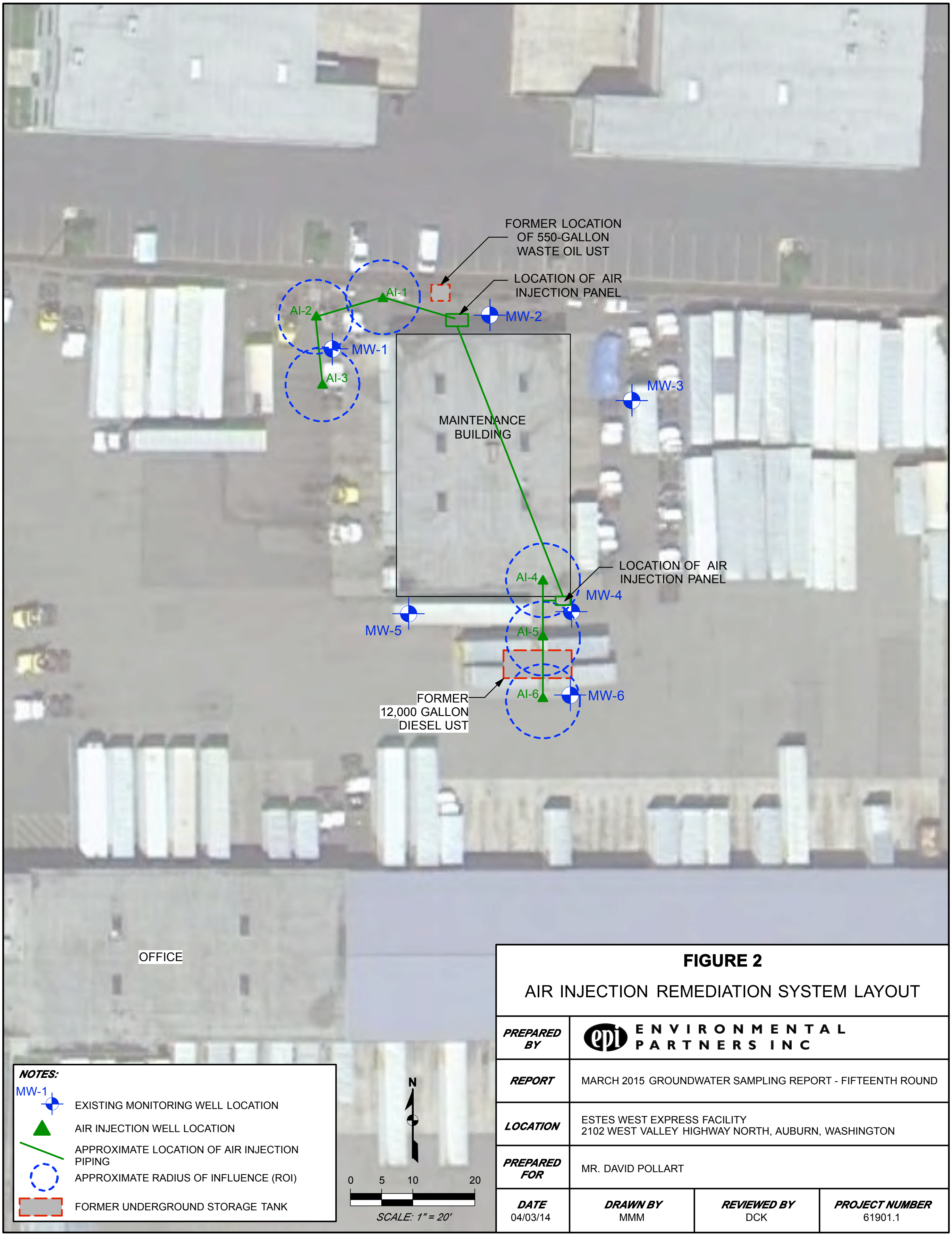


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2015 GROUNDWATER SAMPLING REPORT - FIFTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 04/03/14	**DRAWN BY** MMM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

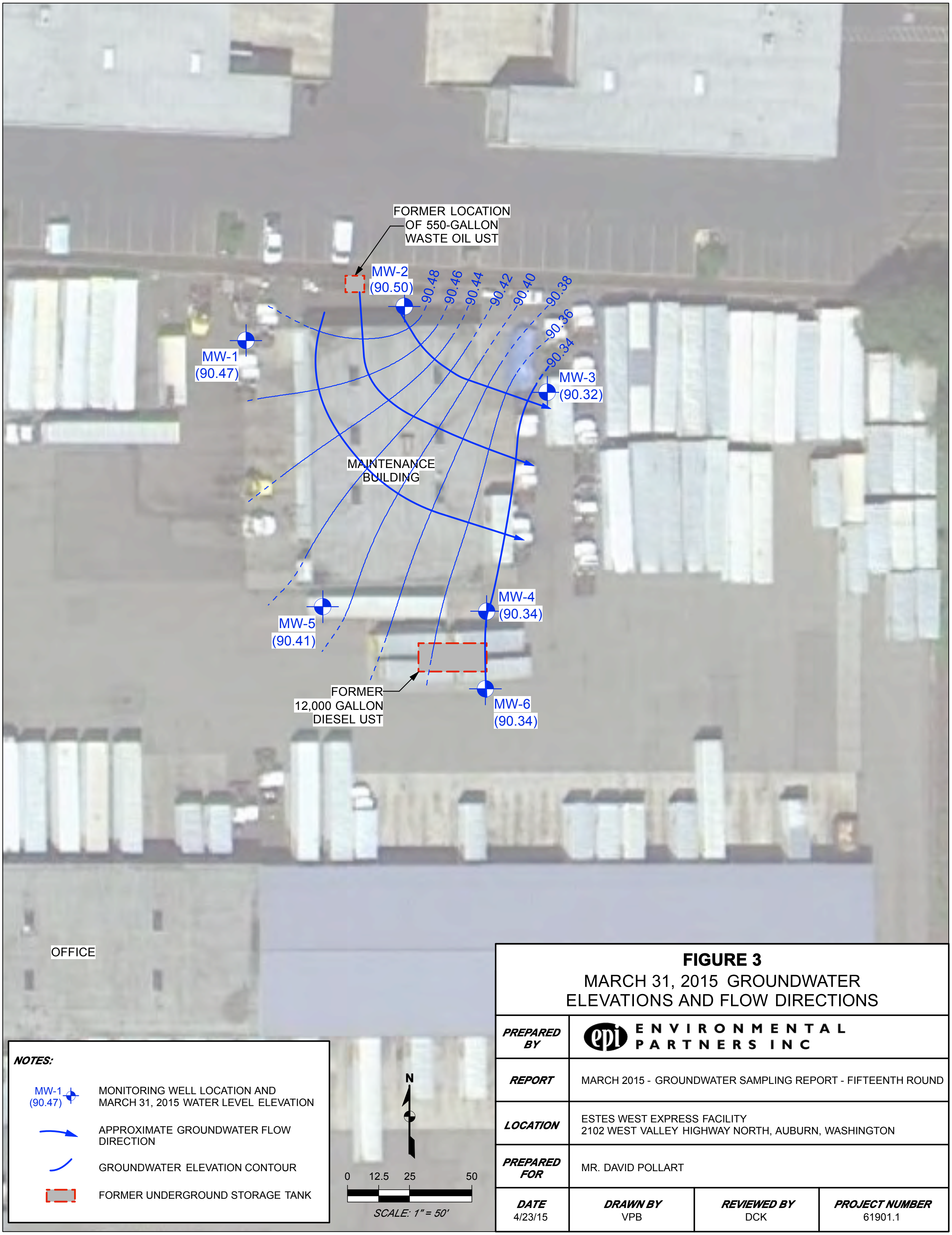


FIGURE 3

MARCH 31, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	MARCH 2015 - GROUNDWATER SAMPLING REPORT - FIFTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
4/23/15	VPB	DCK	61901.1

Attachment A
Analytical Laboratory Report

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

April 7, 2015

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1, F&BI 504014

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on April 1, 2015 from the 61901.1, F&BI 504014 project. There are 4 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
EPI0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 1, 2015 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 504014 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
504014 -01	MW-2
504014 -02	MW-5
504014 -03	MW-3
504014 -04	MW-4
504014 -05	MW-1
504014 -06	MW-6

All quality control requirements were acceptable.

Date of Report: 04/07/15
Date Received: 04/01/15
Project: 61901.1, F&BI 504014
Date Extracted: 04/03/15
Date Analyzed: 04/03/15

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 41-152)
MW-2 504014-01	57 x	<250	87
MW-5 504014-02	52 x	<250	95
MW-3 504014-03	220 x	<250	85
MW-4 504014-04	320 x	<250	94
MW-1 504014-05	340 x	<250	86
MW-6 504014-06	750 x	<250	87
Method Blank 05-681 MB	<50	<250	85

Date of Report: 04/07/15
Date Received: 04/01/15
Project: 61901.1, F&BI 504014

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	111	131	63-142	17

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.

504014

SAMPLE CHAIN OF CUSTODY

ME 04-01-15 C04

Page # 1 of 1

Send Report To: Doug Kunkel

Company: Environmental Partners, Inc

Address: 1180 NW Maple St Suite 310

City, State, ZIP: Issaquah, WA 98027

Phone #: (425) 395-0010 Fax #: (425) 395-0011

SAMPLERS (signature)

PROJECT NAME/NO.: 61901.1

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-2	01	3/31/15	0918	W	1	X												
MW-5	02	↓	0947	↓	1	X												
MW-3	03	↓	1016	↓	1	X												
MW-4	04	↓	1035	↓	1	X												
MW-1	05	↓	1058	↓	1	X												
MW-6	06	↓	1128	↓	1	X												

Samples received at 4 °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:	Monica Moog	EPI	3/31/15	1600
Received by:	Michael Erdahl	F&B Inc	4/1/15	07:50
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

61901.1 3/31/15

0740 M. Mogg (EPI) on-site - AS system off
open wells and begin calibrating YSI
0810 water levels

WELL ID	DTW
MW-5	5.17
MW-2	5.02
MW-3	5.15
MW-4	5.27
MW-1	4.99
MW-6	5.10

0820 YSI calibrated
0830 begin sampling - see field
stabilization forms
0825 NRC on-site to dispose of drums
0925 NRC off-site
1200 EPI off-site

EPI Groundwater Sampling Field Data

Project Name: Pollart
Project Number: 61901.1
Well ID: MW-2
Date: 3/31/15
Sample ID:
Field Team: (Initials) MM
Field Conditions: Cloudy, 50°F

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	0843
End Time	0918
Total Gallons Purged	2.1

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0848	0.4	6.06	0.101	4.53	11.51	56.8	28.3	Clearing
0853	0.6	6.07	0.103	3.93	11.41	54.4	33.1	Clearing
0858	0.8	6.06	0.105	3.50	11.46	54.7	30.7	Clearing
0901	1.0	6.07	0.107	3.23	11.51	52.8	29.2	Clearing
0904	1.1	6.08	0.110	2.97	11.54	49.6	31.6	Clear
0907	1.3	6.09	0.114	2.76	11.52	46.1	30.3	Clear
0911	1.5	6.11	0.117	2.45	11.60	45.5	28.9	Clear
0914	1.7	6.10	0.118	2.27	11.59	46.7	28.5	Clear
0917	1.9	6.10	0.119	2.12	11.62	46.7	29.7	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	0918	500mL AG	—	

End Time: 0924

Comments / Exceptions:

Presence of floating product? YES / NO
Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Pollart
Project Number: 61901.1
Well ID: MW-5
Date: 3/31/15
Sample ID:
Field Team: (Initials) MM
Field Conditions: partly cloudy, 50°F

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	0928
End Time	0947
Total Gallons Purged	1.3

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0936	0.5	6.25	0.439	0.86	13.02	-45.3	11.5	Clear
0940	0.8	6.26	0.436	1.05	13.05	-49.4	9.80	Clear
0943	1.0	6.25	0.434	1.09	13.06	-50.3	8.83	Clear
0946	1.2	6.25	0.435	1.09	13.09	-51.0	9.02	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	0947	500mL AG	—	

End Time: 0952

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Pollart - Estes West
Project Number: 61901.1
Well ID: MW-3
Sample ID:
Field Conditions: partly cloudy, 50°F
Date: 3/31/15
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	0958
End Time	1016
Total Gallons Purged	1.2

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1006	0.4	6.27	0.683	1.03	12.59	-48.4	2.13	Clear
1009	0.6	6.26	0.682	1.14	12.62	-50.5	1.82	Clear
1012	0.8	6.26	0.678	1.24	12.68	-52.2	1.46	Clear
1015	1.0	6.26	0.675	1.24	12.71	-53.2	1.25	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1016	500mL AG	—	

End Time: 1020

Comments / Exceptions:

Presence of floating product? YES / NO
Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Pollart Estes West
Project Number: 61901.1
Well ID: MW-4
Date: 3/31/15
Sample ID:
Field Team: (Initials) MM
Field Conditions: partly cloudy, 58°C

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1021
End Time	1035
Total Gallons Purged	1.0

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1028	0.4	6.30	0.663	0.97	12.31	-50.2	3.50	Clear
1031	0.6	6.30	0.661	0.99	12.33	-50.4	2.63	Clear
1034	0.8	6.29	0.658	0.98	12.38	-49.3	2.31	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1035	500ml AG	—	

End Time: 1039

Comments / Exceptions:

Presence of floating product? YES / NO　　Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:

Project Number:

Well ID:	MW-1	Date	3/31/15
Sample ID:		Field Team: (Initials)	MM
Field Conditions	partly sunny, 55°F, breezy		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1040
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1047	0.4	6.03	0.341	0.55	12.61	66.8	1.21	Clear
1051	0.6	5.89	0.339	0.44	12.64	73.2	0.35	Clear
1054	0.8	5.86	0.338	0.46	12.66	74.3	0.41	Clear
1057	1.0	5.84	0.339	0.45	12.64	74.2	0.22	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1058	500mL AG	—	

End Time 1102

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Pollart - Estes West
Project Number: 61901.1
Well ID: MW-6
Date: 3/31/15
Sample ID:
Field Team: (Initials) MM
Field Conditions: Cloudy, 50°F, breezy

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1106
End Time	1128
Total Gallons Purged	1.7

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. ℃	ORP mV	Turbidity NTU	Appearance/Notes
1112	0.5	6.41	0.552	1.16	13.78	-68.3	19.2	Clear
1115	0.7	6.43	0.554	1.04	13.85	-64.5	14.9	Clear
1118	0.9	6.44	0.547	0.74	13.89	-67.0	20.5	Clear
1121	1.1	6.45	0.540	0.59	13.92	-67.3	20.6	Clear
1124	1.3	6.45	0.533	0.56	13.90	-64.1	13.0	Clear
1127	1.5	6.44	0.526	0.56	13.94	-64.8	9.06	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1128	500mL AG	—	

End Time: 1132

Comments / Exceptions:

Presence of floating product? YES / NO
Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

July 22, 2015

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: June 2015 Groundwater Sampling Report – Sixteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *June 2015 Groundwater Sampling Report – Sixteenth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen (DO) to the groundwater. The planned increased DO concentrations in groundwater due to system operation is intended to stimulate population growth of aerobic bacteria and provide the oxygen necessary for those bacteria to metabolize the dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces the injected air into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that GRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater has been remediated to concentrations below MTCA Method A Groundwater Cleanup Levels.

The success of the air injection remediation system at MW-1 warranted expansion to remediate impacted groundwater at MW-6. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was turned on and tested on April 3, 2015. The expanded system has been running at MW-6 since April 3, 2015. However, a suspected electrical issue with the compressor motor caused the air injection remediation system to shut down again, likely in early June.

The locations of air injection wells and air supply piping for the remediation systems at MW-1 and MW-6 are shown in Figure 2.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) the 16th round of groundwater sampling includes sampling all six monitoring wells. All wells were sampled because operation of the remediation system and seasonal effects have the potential to affect groundwater flow rates and directions. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On June 29, 2015 EPI sampled all six monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 89.10 feet Site Datum (EPI 2013 surveyed elevations) in MW-3 to 89.23 feet in MW-1 and MW-5.

Groundwater elevation contours indicate that groundwater flow was generally from west to east with a northern groundwater flow component under the southern half of the maintenance building at the time of the sampling event as shown in Figure 3. The horizontal groundwater gradient at the Site is so flat that minor differences in groundwater elevations, including those due to normal measurement variability, can significantly affect the apparent groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of $4^{o}C$ or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B.

- DO measurements ranged from 0.15 milligrams per liter (mg/L) in purge water from MW-1 and MW-4, to 0.28 mg/L in purge water from MW-2 and MW-5. The low measured DO concentrations in purge water from the wells indicate anaerobic (reducing) geochemical conditions.

- ORP measurements ranged from -72.9 millivolts (mV) in purge water from MW-6 to 229.3 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater throughout most of the Site and are consistent with the low DO measurements noted in the previous bullet. ORP measurements for MW-1 and MW-2 are positive indicating more aerobic geochemical conditions, likely resulting from previous operation of the air injection system near MW-1 and MW-2.

- Field-measured pH values for purge water from the wells ranged from 5.17 in purge water from MW-1 to 6.32 in purge water from MW-6. The low pH value measured at well MW-1 is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics, including petroleum hydrocarbons, at MW-1. The carbon dioxide generated by this process will form carbonic acid in the localized groundwater near the air injection system upgradient of MW-1.

- HRPH was not detected in any of the samples collected since February 2014 when HRPH was detected at a concentration of 280 μg/L in the sample from MW-1. This concentration is well below the MTCA Method A Cleanup Level of 500 μg/L.

- DRPH was detected in five of the samples collected from the monitoring wells during the June 2015 sampling event but was not detected in the sample from MW-5. The concentrations of DRPH did not exceed the MTCA Method A Cleanup Level of 500 μg/L in any of the samples collected from monitoring wells MW-1 through MW-5. However, the sample from MW-6 had a DRPH concentration of 750 μg/L, which exceeds the MTCA Method A Groundwater CUL.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- HRPH was not detected and DRPH was at detected at a concentration below the MTCA Method A Cleanup Level in the sample from MW-1. This represents the fourth consecutive monitoring event since August 2014 in which the sample from MW-1 did not exceed a Method A Groundwater CUL.

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- The installation and operation of the shallow air injection near MW-1 appears to have significantly decreased the concentrations of DRPH and HRPH in samples from MW-1 to levels below their MTCA Method A Cleanup Levels.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event beginning in August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event. The June 2015 concentration remains relatively consistent with the previous sampling events.

- There have only been two samples from MW-2 with detected concentrations of HRPH, 730 µg/L in August 2012 and 260 µg/L in February 2013. HRPH results for the remaining sampling events were non-detect. The consistent compliance with the MTCA Method A CUL for DRPH and the single historical exceedance of the MTCA Method A CUL for HRPH suggests that further investigations to delineate a plume of impacted groundwater in the area near MW-2 are not warranted.

- HRPH was not detected in samples from any of the wells sampled during this quarterly monitoring event. HRPH has never been detected in samples from MW-3, MW-4, MW-5, and MW-6.

Based on an evaluation of the historical and current sampling results, EPI recommends continuing the quarterly groundwater monitoring program at the Site with the analytical testing modified to discontinue analyzing for HRPH but continuing to analyze for DRPH by Method NWTPH-Dx in samples from the onsite wells. Samples from wells MW-1, MW-2, MW-3, MW-4, and MW-5 continue to be non-detect or have concentrations less than the MTCA Method A CUL for DRPH and consistent long-term non-detections for HRPH. Continued monitoring is expected to confirm this decreasing concentration trend for DRPH.

EPI expanded the shallow air injection system to remediate groundwater near MW-6. The air injection system at MW-6 was designed to be similar to the original air injection system near MW-1 and was operated in a similar manner while in operation. EPI will evaluate the electrical issues with the MW-6 air injection system and make repairs and modifications as needed to bring the system back on line at MW-6.

EPI notes that quarterly monitoring has demonstrated four consecutive quarters of compliance with MTCA Method A Cleanup Levels for data from MW-1, including three consecutive quarterly events with operation of the MW-1 groundwater remediation system discontinued. EPI has suspended operation of the MW-1 remediation system based on the consistent data from MW-1 indicating that the remediation goals have been achieved at this location.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

State of Washington
Hydrogeologist
260
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

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Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

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Attachments

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Attachment B	Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters

Estes West Express Facility

2102 West Valley Highway North, Auburn, Washington

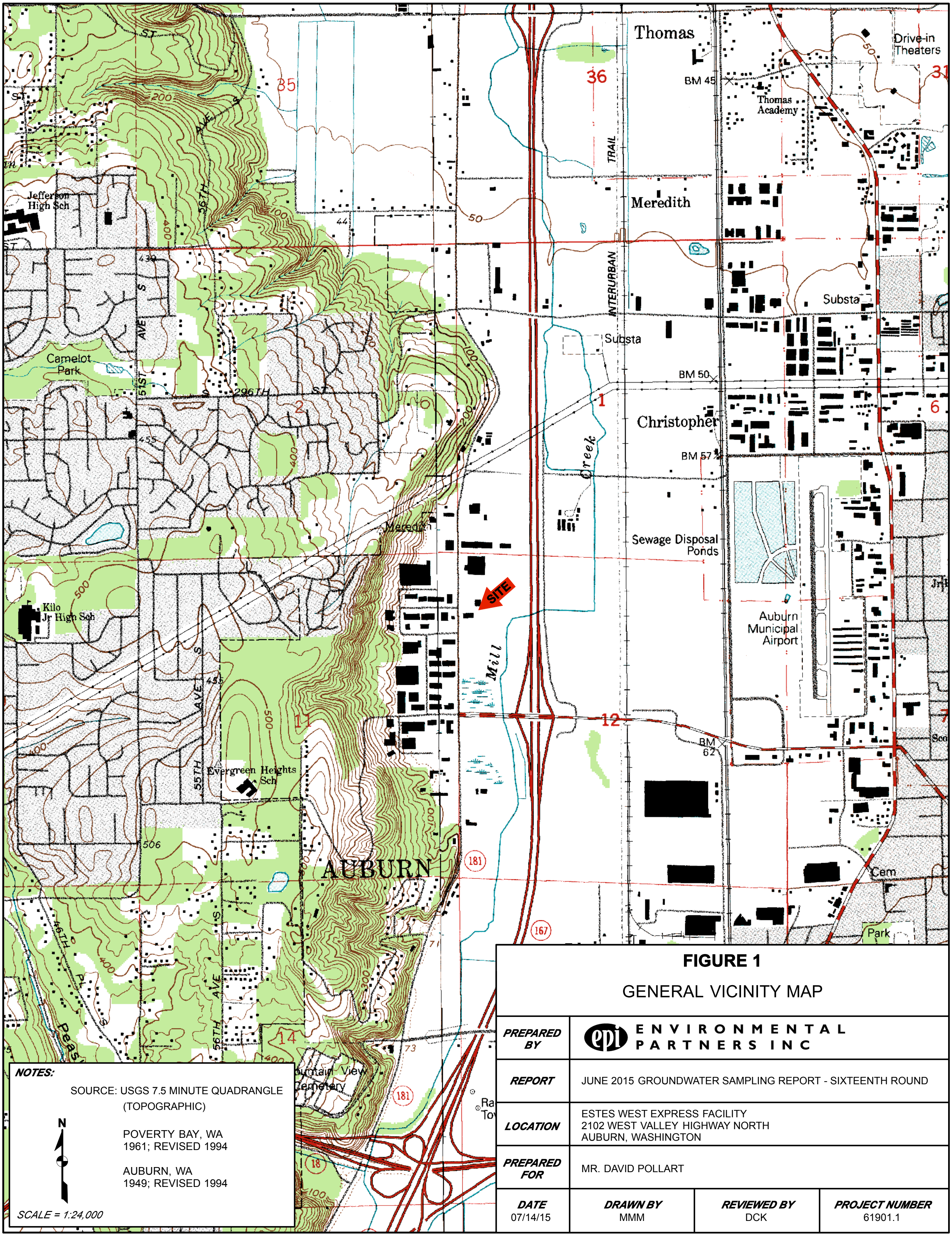
Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	06/29/15	6.23	95.46	89.23	5.17	0.699	0.15	17.69	229.3	0.22
MW-2	06/29/15	6.36	95.52	89.16	5.82	0.361	0.28	17.22	52.8	7.11
MW-3	06/29/15	6.37	95.47	89.10	6.20	0.646	0.25	16.46	-41.3	1.75
MW-4	06/29/15	6.45	95.61	89.16	6.16	0.522	0.15	15.66	-33.6	0.95
MW-5	06/29/15	6.35	95.58	89.23	6.18	0.416	0.28	16.16	-38.3	7.93
MW-6	06/29/15	6.27	95.44	89.17	6.32	0.478	0.17	17.98	-72.9	1.17

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250	NA			
	6/29/15	NA	**97**	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250	NA			
	6/29/15	NA	**130**	<250	NA			
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250	NA			
	6/29/15	NA	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250	NA			
	6/29/15	NA	**750**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[(d)]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

N

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	JUNE 2015 GROUNDWATER SAMPLING REPORT - SIXTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	**DRAWN BY**	**REVIEWED BY**	**PROJECT NUMBER**
07/14/15	MMM	DCK	61901.1

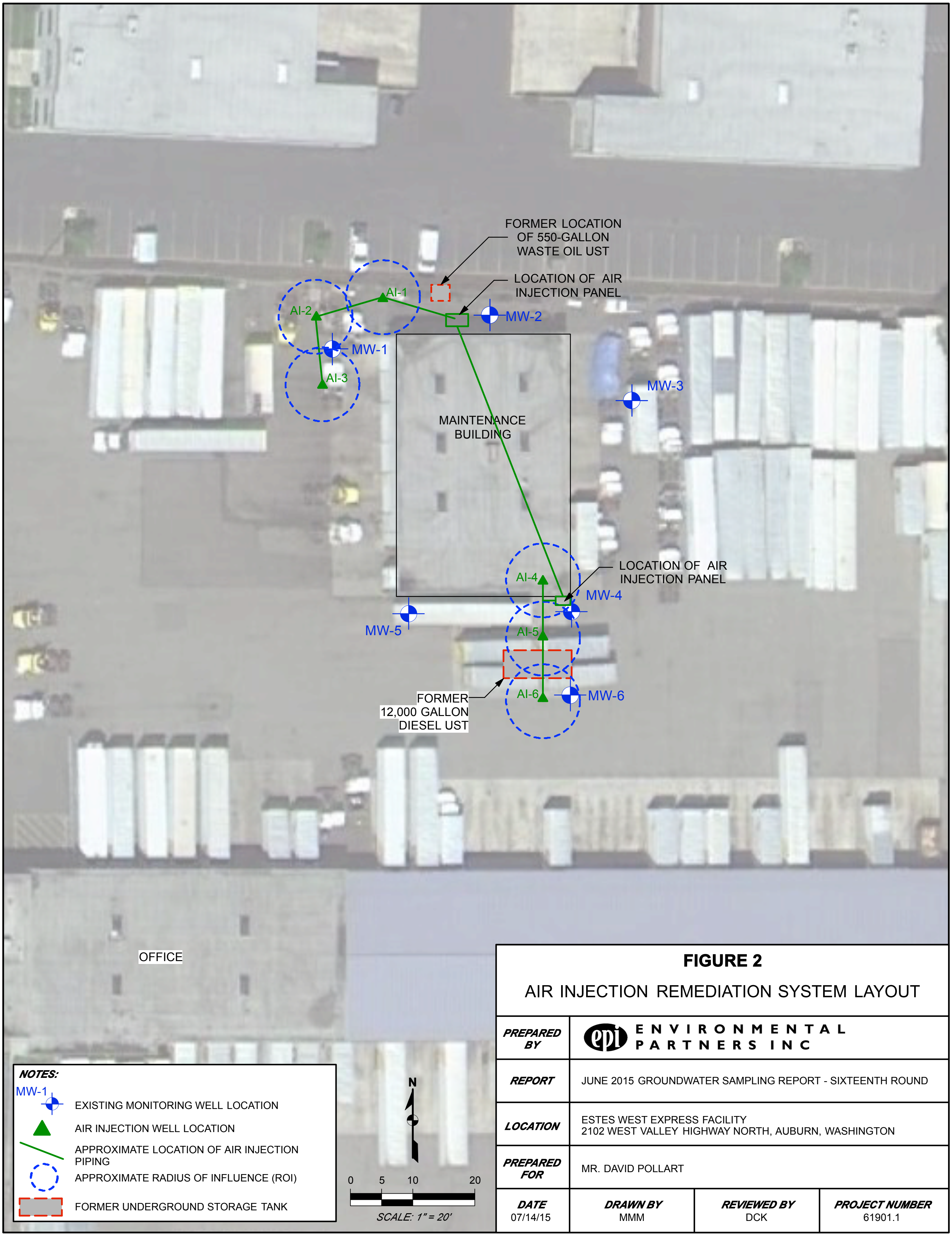


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2015 GROUNDWATER SAMPLING REPORT - SIXTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 07/14/15	**DRAWN BY** MMM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

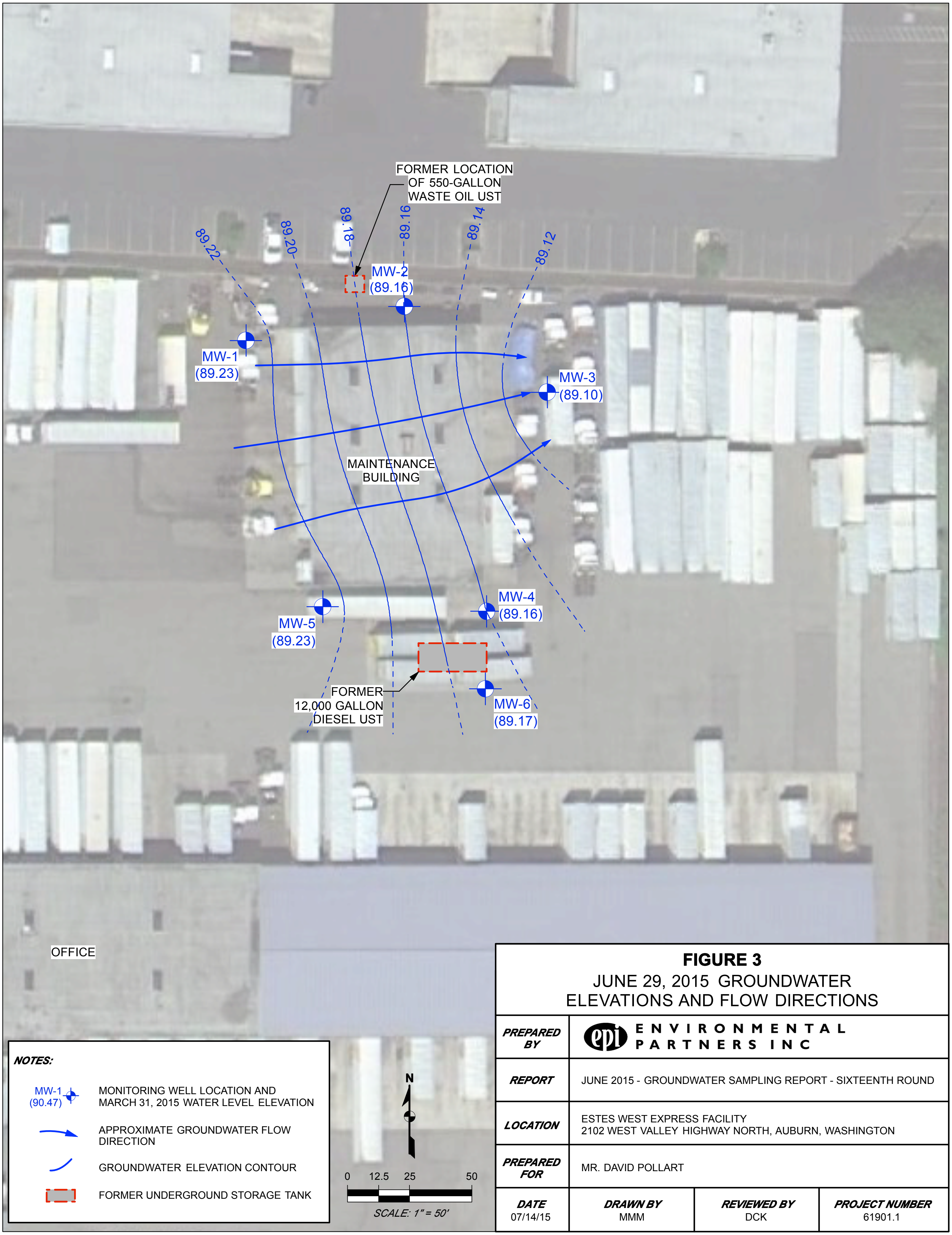


FIGURE 3

JUNE 29, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2015 - GROUNDWATER SAMPLING REPORT - SIXTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 07/14/15	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Field Notes and Forms

61901.1 3/31/15

0740 M. Mogg (EPI) on-site - AS system off
open wells and begin calibrating YSI
0810 water levels

WELL ID	DTW
MW-5	5.17
MW-2	5.02
MW-3	5.15
MW-4	5.27
MW-1	4.99
MW-6	5.10

0820 YSI calibrated
0830 begin sampling - see field
stabilization forms
0825 NRC on-site to dispose of drums
0925 NRC off-site
1200 EPI off-site

6/29/15

0820 M. Mogg (EPI) on-site -
AS system on @ MW-1 and MW-6
0830 ~~collect initial readings from MW-1 and MW-6~~ MM
upon closer inspection - AS system is
not running - talk to J. Bernthal
who will be out shortly to
0845 check on system
collect water levels

WELL ID	DTW (ft)
MW-5	6.35
MW-2	6.36
MW-3	6.37
MW-4	6.45
MW-1	6.23
MW-6	6.27

0900 calibrate YSI
0915 J. Bernthal on-site
attempted to repair blower - called
electrician
1215 Electrician on-site
- replaced fuses, but blower appears
dead
Drum on-site has ~10 gal remaining
1335 EPI off-site

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West		
Project Number:	61901.1		
Well ID:	MW-2	Date	June 29, 2015
Sample ID:	MW-2	Field Team: (Initials)	MM
Field Conditions	sunny, 75°F		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	6.36
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	0926
End Time	0959
Total Gallons Purged	1.8

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0934	0.4	4.87	0.377	1.14	16.57	47.9	12.43	Clear
0938	0.6	5.22	0.372	0.75	16.67	54.4	8.45	Clear
0942	0.8	5.41	0.370	0.60	16.76	60.5	7.28	Clear
0948	1.1	5.66	0.367	0.40	16.99	46.6	6.62	Clear
0951	1.2	5.74	0.365	0.33	17.10	49.3	7.68	Clear
0954	1.4	5.79	0.363	0.30	17.14	51.6	7.50	Clear
0957	1.5	5.82	0.361	0.28	17.22	52.8	7.11	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	0959	1x500mL AG	--	

End Time: 1005

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West		
Project Number:	61901.1		
Well ID:	MW-5	Date	June 29, 2015
Sample ID:	MW-5	Field Team: (Initials)	MM
Field Conditions	Sunny, 75°F		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	6.35
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	1026
End Time	1045
Total Gallons Purged	1.1

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1037	0.6	6.19	0.417	0.55	16.33	-45.5	11.69	Clear
1040	0.7	6.19	0.417	0.34	16.18	-47.6	9.76	Clear
1043	0.9	6.18	0.416	0.28	16.16	-38.3	7.93	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1045	1x500mL AG	--	

End Time 1050

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-3
Sample ID:	MW-3
Field Conditions	Sunny, 75°F

Date: June 29, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	6.37
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	1054
End Time	1117
Total Gallons Purged	1.5

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1104	0.6	6.20	0.688	0.49	16.57	-42.8	2.18	Clear
1107	0.7	6.20	0.677	0.45	16.50	-43.0	1.89	Clear
1110	0.9	6.19	0.662	0.37	16.47	-45.9	1.93	Clear
1113	1.0	6.19	0.650	0.33	16.53	-44.9	1.80	Clear
1116	1.3	6.20	0.646	0.25	16.46	-41.3	1.75	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1117	1x500mL AG	--	

End Time: 1121

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West		
Project Number:	61901.1		
Well ID:	MW-4	Date	June 29, 2015
Sample ID:	MW-4	Field Team: (Initials)	MM
Field Conditions	Sunny, 80°F		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	6.48
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ________________

Start Time	1122
End Time	1144
Total Gallons Purged	1.6

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1137	1.0	6.14	0.524	0.17	15.67	-33.2	1.64	Clear
1140	1.2	6.15	0.523	0.15	15.64	-34.0	1.33	Clear
1143	1.4	6.16	0.522	0.15	18.66	-33.6	0.95	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1144	1x500mL AG	--	

End Time: 1149

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Pollart - Estes West
Project Number: 61901.1
Well ID: MW-1
Sample ID: MW-1
Field Conditions: Sunny, 80°F

Date: June 29, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.): 2
Well Depth (ft.):
Initial Depth to Water (ft.): 6.23
Depth of Water Column:
3 Casing Volumes:
1 Casing Volume:
(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method: Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time: 1153
End Time: 1218
Total Gallons Purged: 1.8

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1203	0.6	5.14	0.698	0.27	17.37	242.3	0.30	Clear
1206	0.8	5.20	0.664	0.24	17.45	233.0	0.33	Clear
1211	1.2	5.18	0.678	0.19	17.71	230.8	0.28	Clear
1214	1.4	5.18	0.690	0.17	17.64	228.3	0.17	Clear
1217	1.6	5.17	0.699	0.15	17.69	229.3	0.22	Clear

Sample Information

Sample Method(s): Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1218	1x500mL AG	--	

End Time: 1222

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-6
Sample ID:	MW-6
Field Conditions	Sunny, 80°F

Date: June 29, 2015

Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1231
End Time	1249
Total Gallons Purged	1.3

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1239	0.5	6.32	0.500	0.25	18.02	-68.4	1.87	Clear
1242	0.7	6.34	0.486	0.18	17.94	-70.7	1.61	Clear
1245	0.9	6.33	0.481	0.15	18.02	-70.5	1.33	Clear
1248	1.1	6.32	0.478	0.17	17.98	-72.9	1.17	Clear

Sample Information

Sample Method(s) Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1249	1x500mL AG	--	

End Time: 1253

Comments / Exceptions:

Presence of floating product? YES / NO

Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment B
Analytical Laboratory Report

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

July 7, 2015

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1, F&BI 506547

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on June 29, 2015 from the 61901.1, F&BI 506547 project. There are 4 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
c: Cynthia Moon
EPI0707R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 29, 2015 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 506547 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
506547 -01	MW-2
506547 -02	MW-5
506547 -03	MW-3
506547 -04	MW-4
506547 -05	MW-1
506547 -06	MW-6

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/15
Date Received: 06/29/15
Project: 61901.1, F&BI 506547
Date Extracted: 07/01/15
Date Analyzed: 07/01/15

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 41-152)
MW-2 506547-01	97 x	<250	92
MW-5 506547-02	<50	<250	92
MW-3 506547-03	130 x	<250	91
MW-4 506547-04	240 x	<250	107
MW-1 506547-05	240 x	<250	93
MW-6 506547-06	750 x	<250	91
Method Blank 05-1310 MB	<50	<250	79

Date of Report: 07/07/15
Date Received: 06/29/15
Project: 61901.1, F&BI 506547

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	99	96	63-142	3

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.

506547

SAMPLE CHAIN OF CUSTODY

ME 06-29-15 C04

Page # 1 of 1

Send Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St, ste 310

City, State, ZIP Issaquah, WA 98027

Phone # 425-395-0010 Fax # 425-395-0011

SAMPLERS (*signature*)	
PROJECT NAME/NO. 61901.1	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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-2	01	6/29/15	0959	W	1	X												
MW-5	02		1045		1	X												
MW-3	03		1117		1	X												
MW-4	04		1144		1	X												
MW-1	05		1218		1	X												
MW-6	06		1249		1	X												
																		Samples received at ___ °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:	Monica Mogg	EPI	6/29/15	0755
Received by:	Michael Erdahl	F&B	↓	↓
Relinquished by:				
Received by:		Samples received at 3 °C		

ENVIRONMENTAL PARTNERS INC 1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

October 15, 2015

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: September 2015 Groundwater Sampling Report – Seventeenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *September 2015 Groundwater Sampling Report – Seventeenth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy did not achieve and maintain compliance with the applicable MTCA Method A CUL.

A 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building on November 28, 2012. The location of the former UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation was intended to stimulate population growth of aerobic bacteria and provide the oxygen necessary for those bacteria to metabolize the dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces the injected air into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that GRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater has been remediated to concentrations below MTCA Method A Groundwater Cleanup Levels.

The success of the air injection remediation system at MW-1 warranted expansion to remediate impacted groundwater at MW-6. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until sometime in June when a suspected electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring repair or replacement.

The locations of air injection wells and air supply piping for the remediation systems at MW-1 and MW-6 are shown in Figure 2.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) the 17th round of groundwater sampling includes sampling all six monitoring wells. All wells were sampled because operation of the remediation system and seasonal effects have the potential to affect groundwater flow rates and directions. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On September 28, 2015 EPI sampled all six monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 88.96 feet Site Datum (EPI 2013 surveyed elevations) in MW-3 to 89.09 feet in MW-1.

Groundwater elevation contours indicate that groundwater flow was generally from west to east with a northern groundwater flow component under the southern half of the maintenance building at the time of the sampling event as shown in Figure 3. The horizontal groundwater gradient at the Site is so flat that minor differences in groundwater elevations, including those due to normal measurement variability, can significantly affect the apparent groundwater flow direction.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, oxidation-reduction potential (ORP), and turbidity approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B.

- DO measurements range from 0.25 milligrams per liter (mg/L) in purge water from MW-3 to 0.84 mg/L in purge water from MW-2. The low measured DO concentrations in purge water from the wells indicate anaerobic (reducing) geochemical conditions.

- ORP measurements ranged from -66.1 millivolts (mV) in purge water from MW-4 to 67.2 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater throughout most of the Site and are consistent with the low DO measurements noted in the previous bullet. The ORP measurement for MW-1 is positive, indicating more aerobic geochemical conditions, likely resulting from previous operation of the air injection system near MW-1. DO and ORP values have been decreasing at MW-1 following remediation system shutdown due to mechanical or electrical issues.

- Field-measured pH values for purge water from the wells ranged from 5.90 in purge water from MW-1 to 6.30 in purge water from MW-4 and MW-6. The low pH value measured at well MW-1 is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics, including petroleum hydrocarbons, at MW-1. The carbon dioxide generated by this naturally occurring process will form carbonic acid in the localized groundwater near the air injection system upgradient of MW-1.

- HRPH was detected in the sample collected from MW-1 at a concentration of 290 μg/L in the sample from MW-1. This concentration is well below the MTCA Method A CUL of 500 μg/L.

- DRPH was detected in five of the samples collected from the monitoring wells during the September 2015 sampling event, but was not detected in the sample collected from MW-5. The concentrations of DRPH did not exceed the MTCA Method A CUL of 500 μg/L in any of the samples collected from monitoring wells MW-2 through MW-5. However, the samples from MW-1 and MW-6 had DRPH concentrations of 700 μg/L and 610 μg/L, respectively, both of which exceed the MTCA Method A Groundwater CUL.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- HRPH was detected at a concentration below the MTCA Method A CUL in the sample from MW-1 but was not detected in samples from any of the other wells sampled. DRPH was at detected at a concentration exceeding the MTCA Method A CUL in the sample collected from MW-1.

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued upon direction from the Site owner.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event since August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event. The September 2015 concentration is lower but remains relatively consistent with the previous sampling events.

- Samples from MW-3, MW-4, and MW-5 have never exceeded MTCA Method A CULs for DRPH or HRPH. In addition, there has only been one sample from MW-2 with a MTCA Method A CUL exceedance (HRPH at 730 µg/L in August 2012). The consistent compliance with the MTCA Method A CUL for DRPH and the single isolated historical exceedance of the MTCA Method A CUL for HRPH suggests that a less frequent sampling schedule is warranted for MW-2, MW-3, MW-4, and MW-5. We therefore recommend a semiannual sampling schedule for these four wells with quarterly sampling retained at MW-1 and MW-6.

EPI expanded the shallow air injection system to remediate groundwater near MW-6. The air injection system at MW-6 was designed to be similar to the original air injection system near MW-1 and was operated in a similar manner while in operation. EPI will evaluate the electrical issues with the air injection system and make repairs and modifications as needed to bring the system back on line at MW-6. EPI will also resume the shallow air injections near MW-1 to address the MTCA Method A CUL exceedance for DRPH during the September 2015 sampling event.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

State of Washington
Hydrogeologist
280
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (^oC)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	09/28/15	6.37	95.46	89.09	5.90	0.350	0.40	18.64	67.2	0.09
MW-2	09/28/15	6.50	95.52	89.02	6.23	0.449	0.84	17.11	-63.4	8.88
MW-3	09/28/15	6.51	95.47	88.96	6.25	0.495	0.25	18.46	-61.7	0.52
MW-4	09/28/15	6.62	95.61	88.99	6.30	0.46	0.27	16.85	-66.1	0.92
MW-5	09/28/15	6.51	95.58	89.07	6.23	0.410	0.52	17.20	-59.7	4.13
MW-6	09/28/15	6.42	95.44	89.02	6.30	0.414	0.37	19.50	-65.8	4.88

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**700[x]**	**290[x]**	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250	NA			
	6/29/15	NA	**97**	<250	NA			
	9/28/15	NA	**150[x]**	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250	NA			
	6/29/15	NA	**130**	<250	NA			
	9/28/15	NA	**110[x]**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**220**[x]	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250	NA			
	6/29/15	NA	<50	<250	NA			
	9/28/15	NA	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250	NA			
	6/29/15	NA	**750**	<250	NA			
	9/28/15	NA	**610**[x]	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[d]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
x - Laboratory flag - sample chromatographic pattern does not resemble the fuel standard used for quantitation
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
Bold and Shaded = Concentration greater than MTCA Method A Groundwater Cleanup Level

Figures

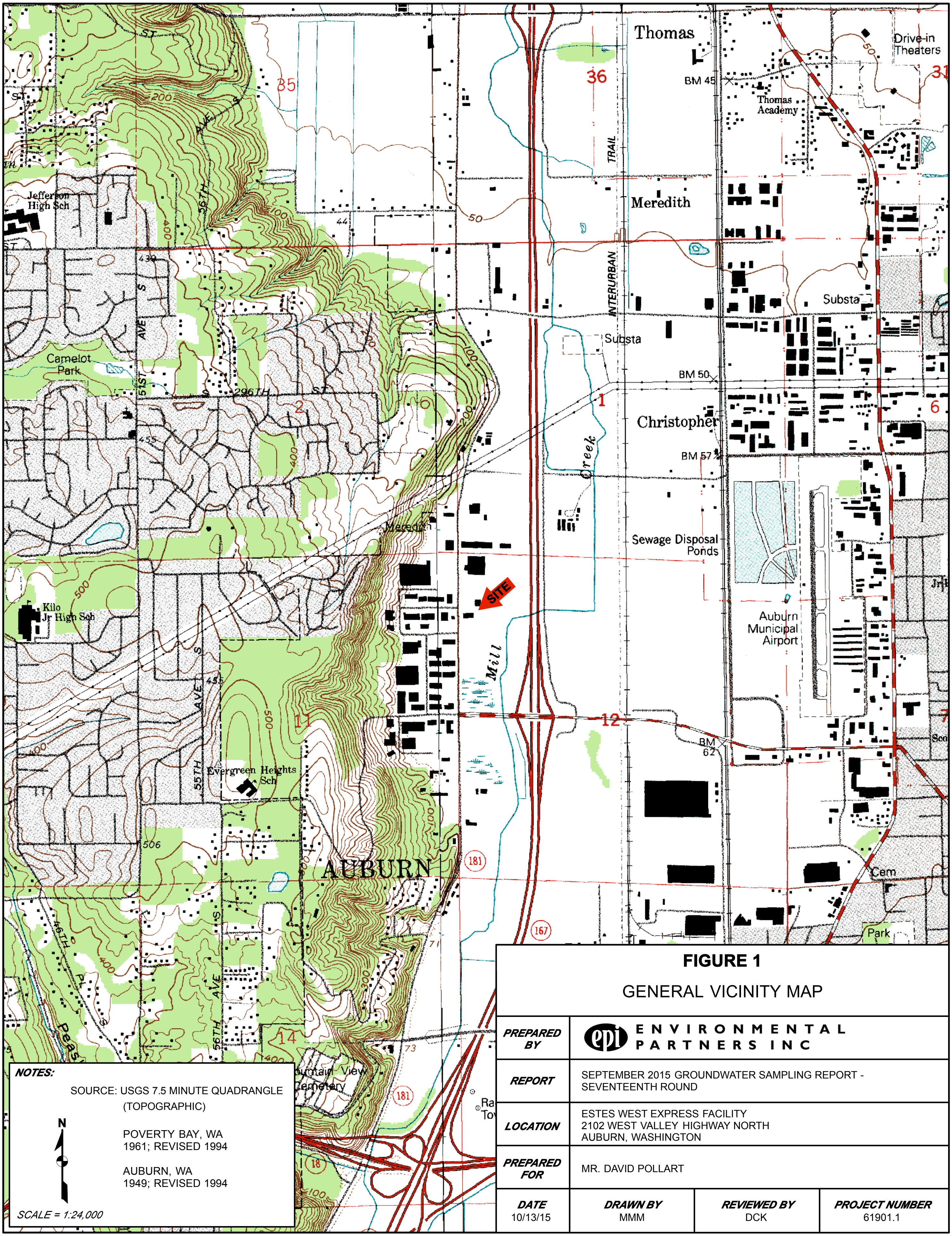


FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2015 GROUNDWATER SAMPLING REPORT - SEVENTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
10/13/15	MMM	DCK	61901.1

NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

N

SCALE = 1:24,000

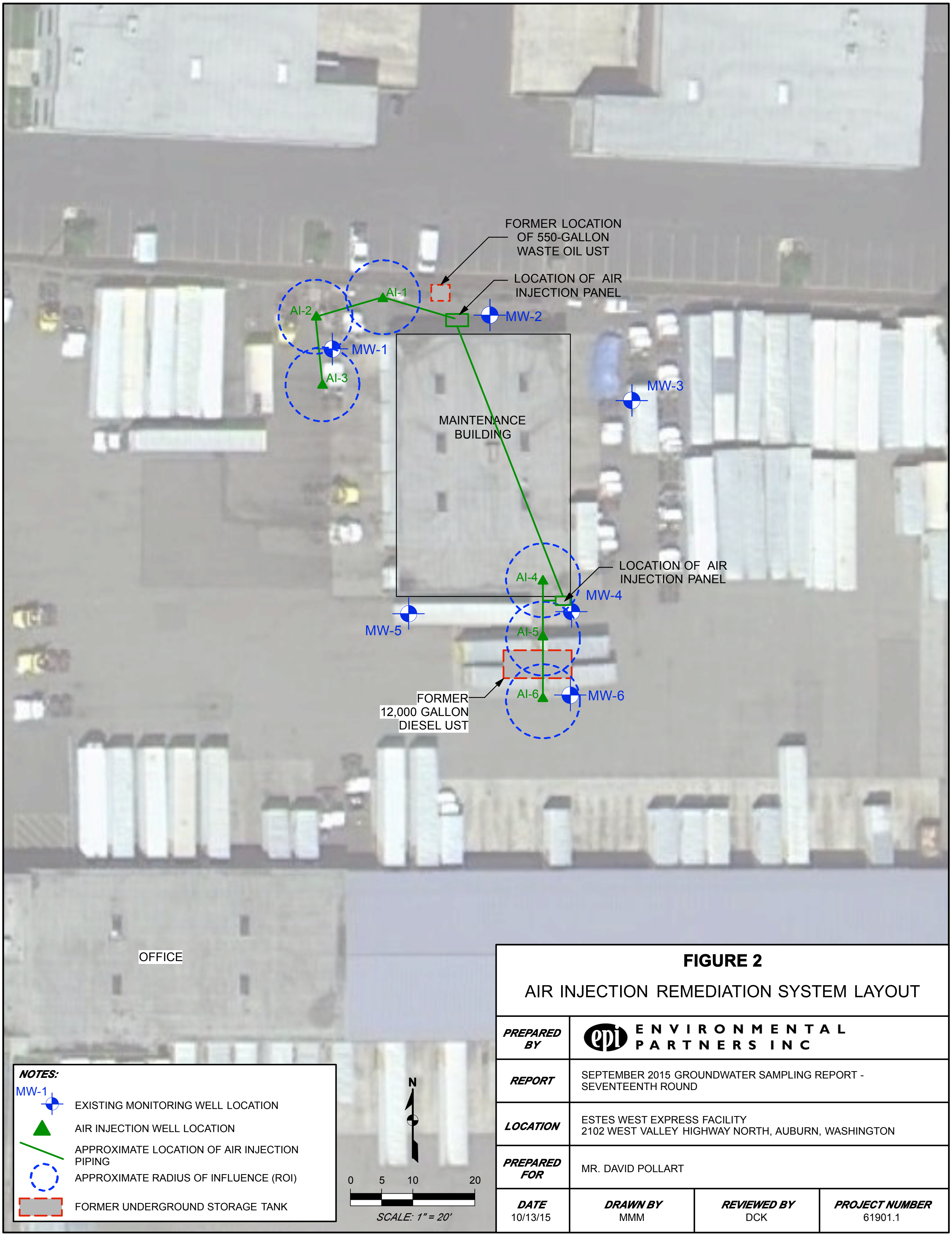
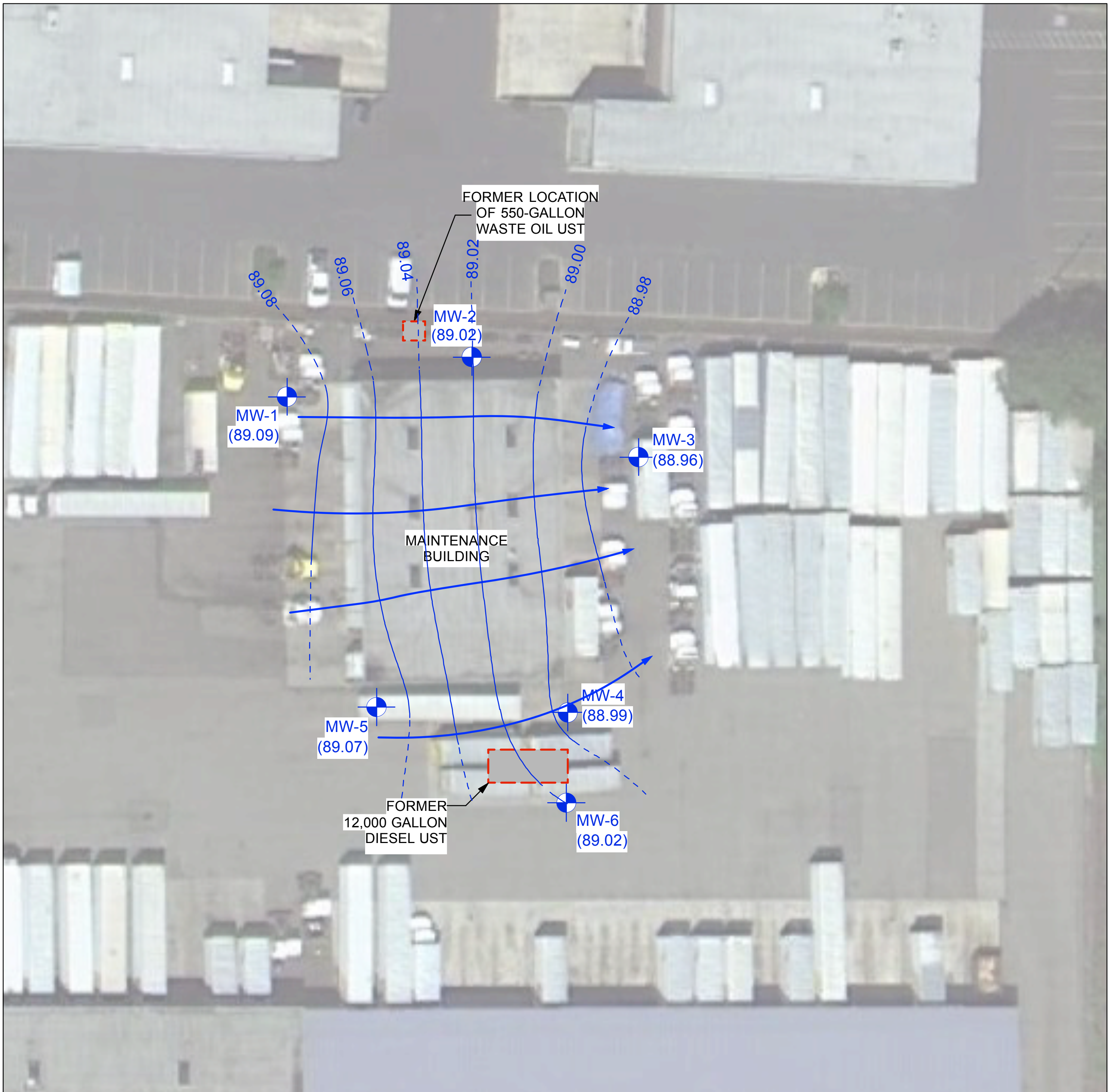


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	SEPTEMBER 2015 GROUNDWATER SAMPLING REPORT - SEVENTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 10/13/15	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1



NOTES:

MW-1 (90.47)	MONITORING WELL LOCATION AND SEPTEMBER 28, 2015 WATER LEVEL ELEVATION
	APPROXIMATE GROUNDWATER FLOW DIRECTION
	GROUNDWATER ELEVATION CONTOUR
	FORMER UNDERGROUND STORAGE TANK

FIGURE 3

SEPTEMBER 28, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	SEPTEMBER 2015 - GROUNDWATER SAMPLING REPORT - SEVENTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 10/13/15	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Field Notes and Forms

8 61901.1 9/28/15

0945 M. Mogg on-site
check in w/ Josh at shop
open wells - AS system off

WELL ID	DTW (ft)
MW-5	6.51
MW-2	6.50
MW-3	6.51
MW-4	6.62
MW-1	6.37
MW-6	6.42

1015 calibrate YSI and LaMotte
1330 clean up
water stored in on-site drum - nearly full will need another next sampling event

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-2
Sample ID:	MW-2
Field Conditions	Sunny, cool

Date: September 28, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1037
End Time	1055
Total Gallons Purged	1.2

Time	Volume Gallons	pH	Conductivity ms/cm^c	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1045	0.5	6.22	0.444	0.93	17.26	-64.1	9.33	Clear
1048	0.7	6.25	0.448	0.98	17.19	-67.5	9.43	Clear
1051	0.9	6.25	0.450	0.98	17.18	-65.3	8.91	Clear
1054	1.1	6.23	0.449	0.84	17.11	-63.4	8.88	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1055	500mL AG	None	

End Time: 1059

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-5
Sample ID:	MW-5
Field Conditions	Sunny, cool

Date: September 28, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	1105
End Time	1121
Total Gallons Purged	1.0

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. ℃	ORP mV	Turbidity NTU	Appearance/Notes
1114	0.5	6.24	0.465	0.51	17.13	-58.8	5.49	Clear
1117	0.7	6.24	0.409	0.60	17.19	-59.4	4.33	Clear
1120	0.9	6.23	0.410	0.52	17.20	-59.7	4.13	Clear

Sample Information

Sample Method(s) Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1121	500mL AG	None	

End Time 1125

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-3
Sample ID:	MW-3
Field Conditions	Sunny; 65°F

Date: September 28, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______________

Start Time	1132
End Time	1156
Total Gallons Purged	1.6

Time	Volume Gallons	pH	Conductivity ms/cm^c	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1137	0.3	6.27	0.563	0.49	18.47	-53.2	0.686	Clear
1140	0.5	6.27	0.547	0.57	18.49	-56.4	0.57	Clear
1143	0.7	6.27	0.527	0.44	18.49	-58.3	0.71	Clear
1146	0.9	6.27	0.519	0.35	18.45	-58.8	0.63	Clear
1149	1.1	6.25	0.508	0.31	18.48	-58.5	0.58	Clear
1152	1.3	6.25	0.501	0.27	18.48	-60.6	0.59	Clear
1155	1.5	6.25	0.495	0.25	18.46	-61.7	0.52	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1156	500mL AG	None	

End Time: 1159

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-4
Sample ID:	MW-4
Field Conditions	Sunny, 65°F

Date	September 28, 2015
Field Team: (Initials)	MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1203
End Time	1222
Total Gallons Purged	1.2

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1212	0.5	6.26	0.461	0.34	17.03	-55.6	2.76	Clear
1215	0.7	6.29	0.461	0.38	16.93	-59.9	1.72	Clear
1218	0.85	6.29	0.461	0.34	16.83	-63.4	1.15	Clear
1221	1.0	6.30	0.460	0.27	16.85	-66.1	0.92	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1222	500mL AG	None	

End Time 1226

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West		
Project Number:	61901.1		
Well ID:	MW-1	Date	September 28, 2015
Sample ID:	MW-1	Field Team: (Initials)	MM
Field Conditions	Sunny, 65°F		

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______________

Start Time	1230
End Time	1244
Total Gallons Purged	1.1

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1237	0.5	5.94	0.347	0.36	18.62	56.0	0.03	Clear
1240	0.7	5.92	0.348	0.38	18.69	62.1	0.11	Clear
1243	0.9	5.90	0.350	0.40	18.64	47.2	0.09	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1244	500mL AG	None	

End Time: 1249

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:	Pollart - Estes West
Project Number:	61901.1
Well ID:	MW-6
Sample ID:	MW-6 /Dup1
Field Conditions	Sunny, 65°F

Date: September 28, 2015
Field Team: (Initials) MM

Purge Information

Well Diameter (in.)	2
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ___________

Start Time	1257
End Time	1311
Total Gallons Purged	1.1

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1304	0.5	6.28	0.418	0.35	19.58	-60.5	7.05	Clear
1307	0.7	6.29	0.415	0.36	19.53	-63.8	5.73	Clear
1310	0.9	6.30	0.414	0.37	19.50	-65.8	4.88	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
NWTPH-Dx	1311	500mL AG	None	Dup1 (time of 1200)

End Time: 1320

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment B
Analytical Laboratory Report

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

October 6, 2015

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901.1, F&BI 509511

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on September 28, 2015 from the 61901.1, F&BI 509511 project. There are 4 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
c: Monica Mogg
EPI1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 28, 2015 by Friedman & Bruya, Inc. from the Environmental Partners 61901.1, F&BI 509511 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
509511-01	MW-2
509511-02	MW-5
509511-03	MW-3
509511-04	MW-4
509511-05	MW-1
509511-06	MW-6
509511-07	Dup1

All quality control requirements were acceptable.

Date of Report: 10/06/15
Date Received: 09/28/15
Project: 61901.1, F&BI 509511
Date Extracted: 09/30/15
Date Analyzed: 09/30/15

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)
MW-2 509511-01	150 x	<250	101
MW-5 509511-02	<50	<250	96
MW-3 509511-03	110 x	<250	102
MW-4 509511-04	220 x	<250	91
MW-1 509511-05	700 x	290 x	101
MW-6 509511-06	610 x	<250	100
Dup1 509511-07	580 x	<250	94
Method Blank 05-2002 MB	<50	<250	84

Date of Report: 10/06/15
Date Received: 09/28/15
Project: 61901.1, F&BI 509511

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	90	93	58-134	3

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.

509511

SAMPLE CHAIN OF CUSTODY

ME 09-28-15 D03

Page # 1 of 1

Send Report To Doug Kunkel / Monica Mogg

Company Environmental Partners, Inc

Address 1180 NW Maple St Suite 310

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature)

PROJECT NAME/NO. 61901.1

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-2	01	9/28/15	1055	W	1	X												
MW-5	02	↓	1121	↓	1	X												
MW-3	03	↓	1156	↓	1	X												
MW-4	04	↓	1222	↓	1	X												
MW-1	05	↓	1244	↓	1	X												
MW-6	06	↓	1311	↓	1	X												
Dup1	07	↓	1200	↓	1	X												
																		Samples received at 12 °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: [signature]	Monica Mogg	EPI	9/28/15	0749
Received by: [signature]	Michael Erdahl	F&Bine	9/28/15	↓
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

March 15, 2016

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: March 2016 Groundwater Sampling Report – Eighteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *March 2016 Groundwater Sampling Report – Eighteenth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012 a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998 analytical data for groundwater samples from the Site indicate that MW-1 has the greatest and most consistently detected concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH). The data indicated that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs.

The success of the air injection remediation system at MW-1 demonstrated that warranted expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until sometime in June when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. The air injection system remained running during the March 2016 groundwater sampling event so that groundwater flow patterns during system operation could be evaluated.

GROUNDWATER SAMPLING PROCEDURES

Based on discussions with Eugene Freeman (Ecology) the 18th round of groundwater sampling includes sampling all six monitoring wells. All wells were sampled because operation of the remediation system and seasonal effects have the potential to affect groundwater flow rates and directions. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On March 3, 2016 EPI sampled all six monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 90.92 feet Site Datum (EPI 2013 surveyed elevations) in MW-3 to 93.28 feet in MW-1.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the sampling event as shown in Figure 3. It should be noted that depth to groundwater was conducted while the air injection system was in operation. This produced anomalous readings at monitoring wells MW-1 and MW-4 due to localized groundwater mounding caused by the air injection system. The data from MW-1 and MW-4 are presented on Figure 3 but were not used as part of the groundwater elevation contour calculations.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B.

- DO measurements range from 0.67 milligrams per liter (mg/L) in purge water from MW-6 to 10.71 mg/L in purge water from MW-1. Low measured DO concentrations in purge water from the wells, particularly at MW-6, indicate anaerobic (reducing) geochemical conditions. The high measured DO concentrations, particularly at MW-1 and MW-4, indicate increased oxygen levels corresponding to the re-started operation of the air injection system one month prior to the sampling event.

- ORP measurements ranged from -76.1 millivolts (mV) in purge water from MW-6 to 93.6 mV in purge water from MW-4. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater, while positive ORP measurements indicate more aerobic geochemical conditions, likely resulting from operation of the air injection system near MW-1 and MW-4.

- Field-measured pH values for purge water from the wells ranged from 5.82 in purge water from MW-4 to 6.79 in purge water from MW-1. The low pH value measured at well MW-4 is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics, including petroleum hydrocarbons. The carbon dioxide generated by this naturally occurring process will form carbonic acid in the localized groundwater near the air injection system.

- HRPH was detected in the groundwater sample from MW-6 at a concentration of 390 μg/L, which is less than the MTCA Method A CUL of 500 μg/L. This represents the first detection of HRPH in samples from well MW-6. HRPH was not detected in samples from any other monitoring wells during the March 2016 sampling event.

- DRPH was detected in four of the samples collected from the monitoring wells during the March 2016 sampling event. DRPH was not detected in the samples collected from MW-2 and MW-5. The concentrations of DRPH did not exceed the MTCA Method A CUL of 500 μg/L in any of the samples collected from monitoring wells, with the exception of MW-6, which contained DRPH concentrations of 1,100 μg/L.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- Low DO and negative ORP measurements in purge water from MW-6 indicate that the air injection system has not yet established aerobic geochemical conditions at that location. The air injection well closest to MW-6 is the farthest from the blower and has greater piping head loss than other injection wells in the system reducing air flow to the subsurface compared to the other wells.

- HRPH was detected in the groundwater sample from MW-6 during the March 2016 sampling event. This represents the first detection of HRPH in a sample from MW-6. HRPH was not detected in samples from any of the remaining five wells sampled.

- DRPH was detected in samples from four of the six wells sampled but was only at a concentration exceeding the MTCA Method A CUL in the sample collected from MW-6.

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event since August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event. The March 2016 concentration remains relatively consistent with the previous sampling events.

- Samples from MW-3, MW-4, and MW-5 have never exceeded MTCA Method A CULs for DRPH or HRPH. In addition, there has only been one sample from MW-2 with a MTCA Method A CUL exceedance (HRPH at 730 µg/L in August 2012). The consistent compliance with the MTCA Method A CUL for DRPH and the single isolated historical exceedance of the MTCA Method A CUL for HRPH suggests that a less frequent sampling schedule is warranted for MW-2, MW-3, MW-4, and MW-5. We therefore recommend a semiannual sampling schedule for these four wells with quarterly sampling retained at MW-1 and MW-6.

EPI expanded the shallow air injection system to remediate groundwater near MW-6. The air injection system at MW-6 was designed to be similar to the original air injection system near MW-1 and will be operated in a similar manner. EPI resumed the shallow air injections near MW-1 and MW-6 to address the MTCA Method A CUL exceedances for DRPH in samples from both wells during the September 2015 sampling event.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

State of Washington
Hydrogeologist
280
Licensed Geologist
DOUGLAS C. KUNKEL

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1	Summary of Groundwater Stabilization Parameters
Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Air Injection Remediation System Layout
Figure 3	March 3, 2016 Groundwater Elevations, and Flow Directions

Attachments

Attachment A	Field Notes and Forms
Attachment B	Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (^oC)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	03/03/16	2.18	95.46	93.28	6.79	0.280	10.71	11.10	10.8	NM
MW-2	03/03/16	2.64	95.52	92.88	5.93	0.299	1.34	10.82	70.3	NM
MW-3	03/03/16	4.55	95.47	90.92	6.17	1.145	1.48	12.63	-70.8	NM
MW-4	03/03/16	3.20	95.61	92.41	5.82	1.132	4.79	11.34	93.6	NM
MW-5	03/03/16	4.59	95.58	90.99	6.19	0.907	2.03	13.00	-6.5	NM
MW-6	03/03/16	4.53	95.44	90.91	6.26	1.211	0.67	14.39	-76.1	NM

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

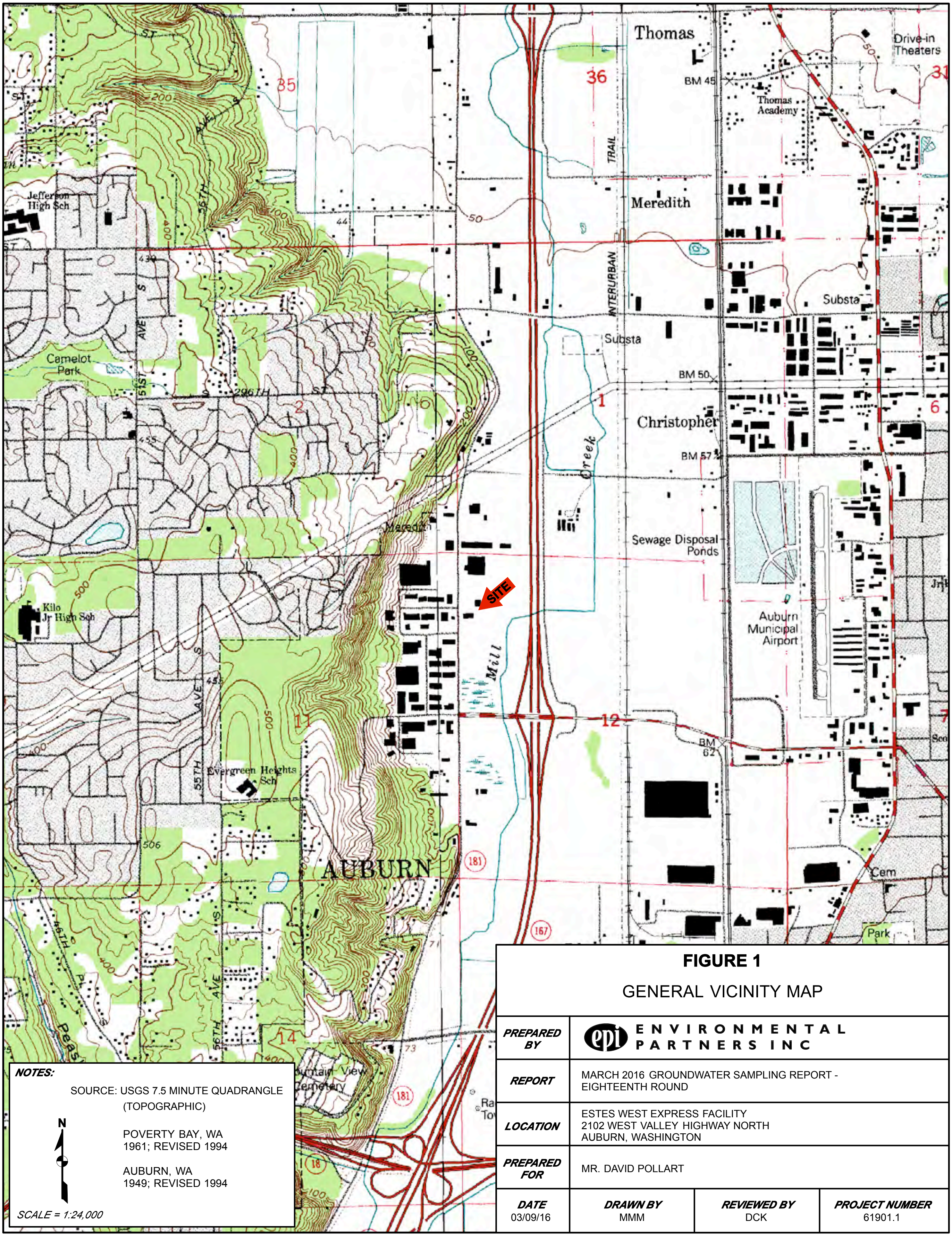
Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**700**	**290**	NA			
	3/3/16	NA	**220**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250	NA			
	6/29/15	NA	**97**	<250	NA			
	9/28/15	NA	**150**	<250	NA			
	3/3/16	NA	<50	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250	NA			
	6/29/15	NA	**130**	<250	NA			
	9/28/15	NA	**110**	<250	NA			
	3/3/16	NA	**92**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**220**	<250	NA			
	3/3/16	NA	**130**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250	NA			
	6/29/15	NA	<50	<250	NA			
	9/28/15	NA	<50	<250	NA			
	3/3/16	NA	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250	NA			
	6/29/15	NA	**750**	<250	NA			
	9/28/15	NA	**610**	<250	NA			
	3/3/16	NA	**1,100**	**390**	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[(d)]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
(shaded) = Concentration is greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

N

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	MARCH 2016 GROUNDWATER SAMPLING REPORT - EIGHTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
03/09/16	MMM	DCK	61901.1

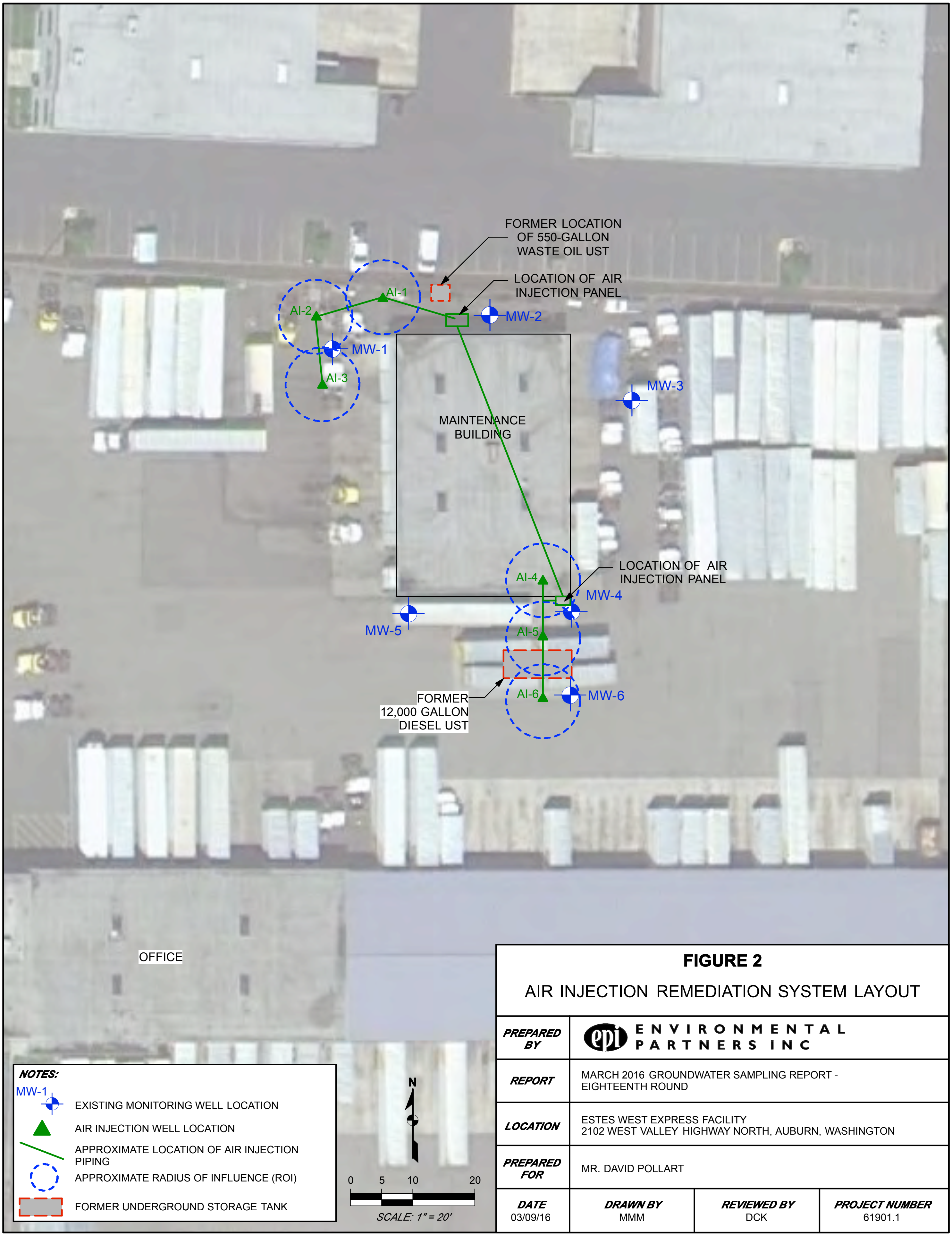


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2016 GROUNDWATER SAMPLING REPORT - EIGHTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 03/09/16	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

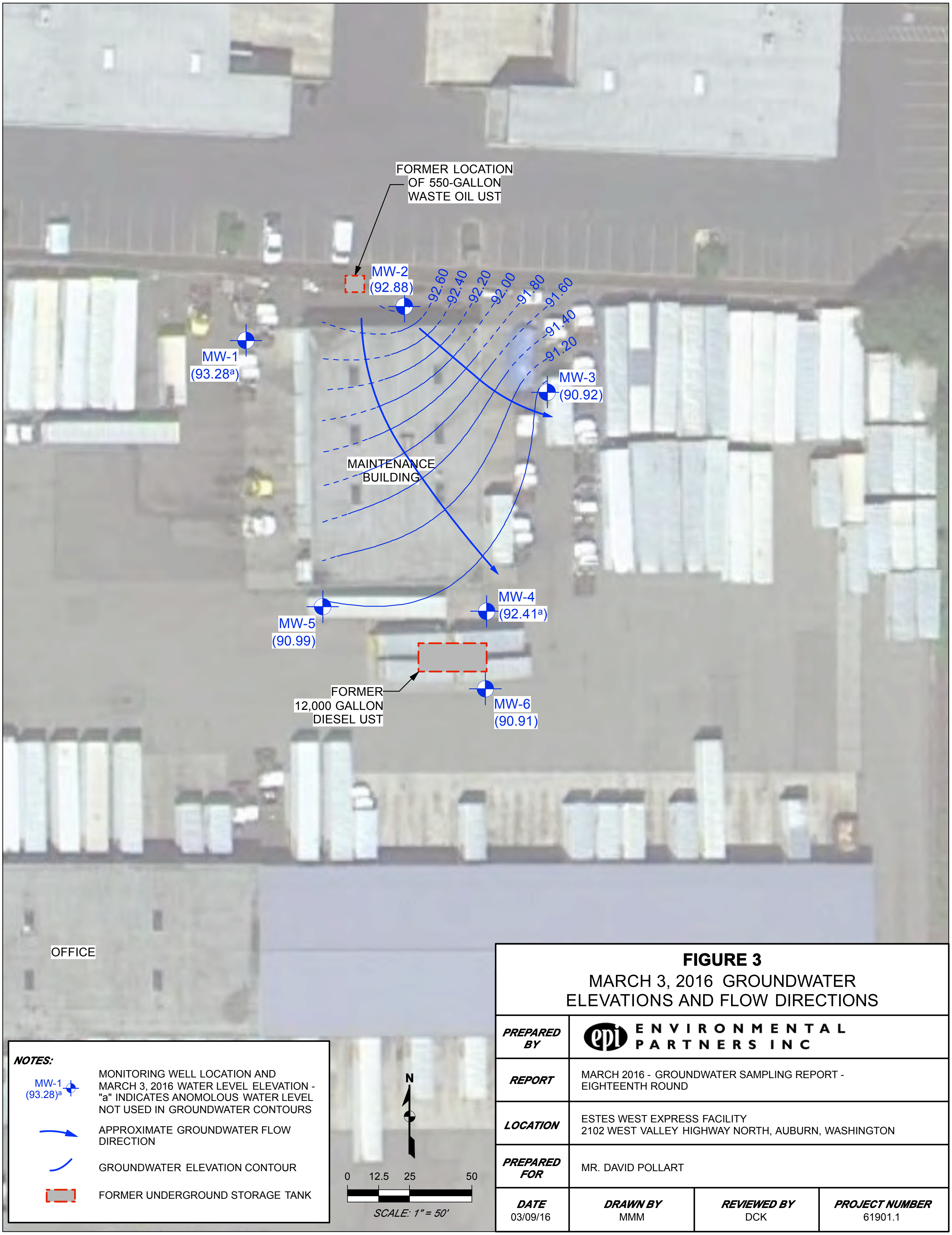


FIGURE 3

MARCH 3, 2016 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2016 - GROUNDWATER SAMPLING REPORT - EIGHTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 03/09/16	**DRAWN BY** MMM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

Attachment A
Field Notes and Forms

THE LOW-VOLUME SOUND FROM THE BLEEDER VALVES.

1230 - OFF SITE.

3/3/16 J. Sherrod on-site

Overcast ≈ 40°F

0705 on-site, meet with Josh.

Open all wells

Well ID	DTW (ft)
MW-5	4.59'
MW-2	2.64'
MW-3	4.55'
MW-4	3.20'
MW-1	2.18'
MW-6	4.53'

0800 calibrate YSI

0830 J. Sherrod off-site to replace YSI

0950 J. Sherrod on-site, calibrate YSI

1300 Air sparge settings

Compressor PSI ≈ 13.5 SCFM

1: 17.5 psi, ≈ 1.5 SCFM

2: 7 psi, ≈ 2.5 SCFM

3: 16.5 psi, ≈ 2.5 SCFM

4: 7.5 psi, ≈ 5 SCFM

5: 7 psi, ≈ 5 SCFM

6: 18 psi, ≈ 0 SCFM

1310 J. Sherrod off-site

YSI 556 Multiparameter Probe Instrument Calibration Form

Meter Type	Manufacturer	Model Number	Mfg. Serial#	Date	Time	Battery life
YSI-multiparameter	YSI	556	10A10178G	3/3/16	1000	1/2

Calibration Notes:

Buffer/Standard

Instrument Readings		Manufacturer	Lot Number	Comments
pH 4 =	3.86	LSS	E259-03	—
pH 7 =	6.99	LSS	E180-09	—
pH 10 =	9.98	LSS	E301-04	—
Turbidity =	—	—	—	—
Conductivity =	—	—	—	—
ORP =	—	—	—	—
Dissolved O2 =	—	—	—	—
Temp. =	—			—

Meter Type	Manufacturer	Model Number	Mfg. Serial#	Date	Time	Battery life
YSI-multiparameter	YSI	556				

Calibration Notes:

Buffer/Standard

Instrument Readings		Manufacturer	Lot Number	Comments
pH 4 =				
pH 7 =				
pH 10 =				
Turbidity =				
Conductivity =				
ORP =				
Dissolved O2 =				
Temp. =				

EPI Groundwater Sampling Field Data

Project Nam	Pollart - Estes West		
Project Num	61901.1		
Well ID:	MW-1	Date	3-Mar-16
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : __________

Start Time	1202
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1206	0.2	6.91	0.288	10.54	11.19	-26.3	—	Clear
1209	0.5	6.78	0.289	10.47	11.17	-10.2	—	Clear
1212	0.8	6.72	0.284	10.53	11.05	3.2	—	Clear
1215	1.1	6.74	0.281	10.85	11.12	10.8	—	Clear
1218	1.4	6.79	0.280	10.71	11.10	10.8	—	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1219	500 mL Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Nam	Pollart - Estes West		
Project Num	61901.1		
Well ID:	MW-5	Date	3-Mar-16
Sample ID:	MW-5	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______________

Start Time	1132
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1137	0.3	6.30	0.853	4.01	13.04	4.5	—	clear
1140	0.6	6.20	0.862	3.10	12.95	9.9	—	clear
1143	0.9	6.18	0.869	2.83	12.93	10.1	—	clear
1146	1.2	6.18	0.888	2.15	12.93	6.6	—	clear
1149	1.5	6.18	0.900	2.00	12.96	-1.3	—	clear
1152	1.8	6.19	0.907	2.03	13.00	-6.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1153	500 ml Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Nam Pollart - Estes West
Project Num 61901.1

Well ID:	MW-6	Date	3-Mar-16
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	1105
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1108	0.2	6.12	1.229	1.17	14.05	-52.9	—	clear
1111	0.4	6.24	1.222	0.85	13.95	-64.0	—	clear
1114	0.6	6.22	1.215	0.83	13.86	-66.6	—	clear
1117	0.8	6.25	1.203	0.65	14.45	-74.6	—	clear
1120	1.0	6.33	1.213	0.67	14.40	-76.1	—	clear
1123	1.2	6.25	1.213	0.63	14.43	-74.6	—	clear
1126	1.4	6.26	1.211	0.67	14.39	-76.1	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1127	500mL Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Nam	Pollart - Estes West		
Project Num	61901.1		
Well ID:	MW-4	Date	3-Mar-16
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	1032
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1035	0.2	6.38	1.131	6.47	11.39	15.0	—	muddy
1038	0.4	6.16	1.135	6.30	11.29	45.7	—	muddy
1041	0.6	6.06	1.136	6.09	11.32	60.2	—	clear
1044	0.8	5.97	1.136	5.42	11.35	74.4	—	clear
1047	1.0	5.90	1.136	4.99	11.37	83.1	—	clear
1050	1.2	5.85	1.136	4.78	11.32	90.4	—	clear
1053	1.4	5.82	1.132	4.79	11.34	93.6	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1054	500 mL Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Nam	Pollart - Estes West		
Project Num	61901.1		
Well ID:	MW-3	Date	3-Mar-16
Sample ID:	MW-3	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1002
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1005	0.1	6.06	1.269	5.61	12.74	-84.5	—	muddy
1008	0.3	5.98	1.206	2.38	12.56	-64.6	—	clear
1011	0.5	6.07	1.200	2.28	12.58	-63.0	—	clear
1014	0.7	6.09	1.195	2.07	12.61	-65.6	—	clear
1017	0.9	6.14	1.171	1.77	12.61	-68.5	—	clear
1020	1.2	6.16	1.152	1.54	12.60	-69.8	—	clear
1023	1.5	6.17	1.145	1.48	12.63	-70.8	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1024	500mL Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Nam	Pollart - Estes West		
Project Num	61901.1		
Well ID:	MW-7	Date	3-Mar-16
Sample ID:	MW-7	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ___________

Start Time	1223
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1225	0.2	6.49	0.298	3.82	11.00	53.8	—	Clear
1228	0.5	6.17	0.298	2.07	11.00	65.5	—	clear
1231	0.8	6.05	0.297	1.48	10.91	68.7	—	clear
1234	1.1	5.95	0.300	1.34	10.85	70.9	—	clear
1237	1.4	5.93	0.299	1.34	10.82	70.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1238	500 mL Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment B
Analytical Laboratory Report

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

March 8, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 603066

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on March 3, 2016 from the 61901, F&BI 603066 project. There are 4 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
EPI0308R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 3, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 603066 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
603066 -01	MW-3
603066 -02	MW-4
603066 -03	MW-6
603066 -04	MW-5
603066 -05	MW-1
603066 -06	MW-2

All quality control requirements were acceptable.

Date of Report: 03/08/16
Date Received: 03/03/16
Project: 61901, F&BI 603066
Date Extracted: 03/04/16
Date Analyzed: 03/04/16

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-3 603066-01	92 x	<250	98
MW-4 603066-02	130 x	<250	96
MW-6 603066-03	1,100 x	390 x	92
MW-5 603066-04	<50	<250	108
MW-1 603066-05	220 x	<250	115
MW-2 603066-06	<50	<250	106
Method Blank 06-418 MB	<50	<250	103

Date of Report: 03/08/16
Date Received: 03/03/16
Project: 61901, F&BI 603066

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	113	104	58-134	8

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.

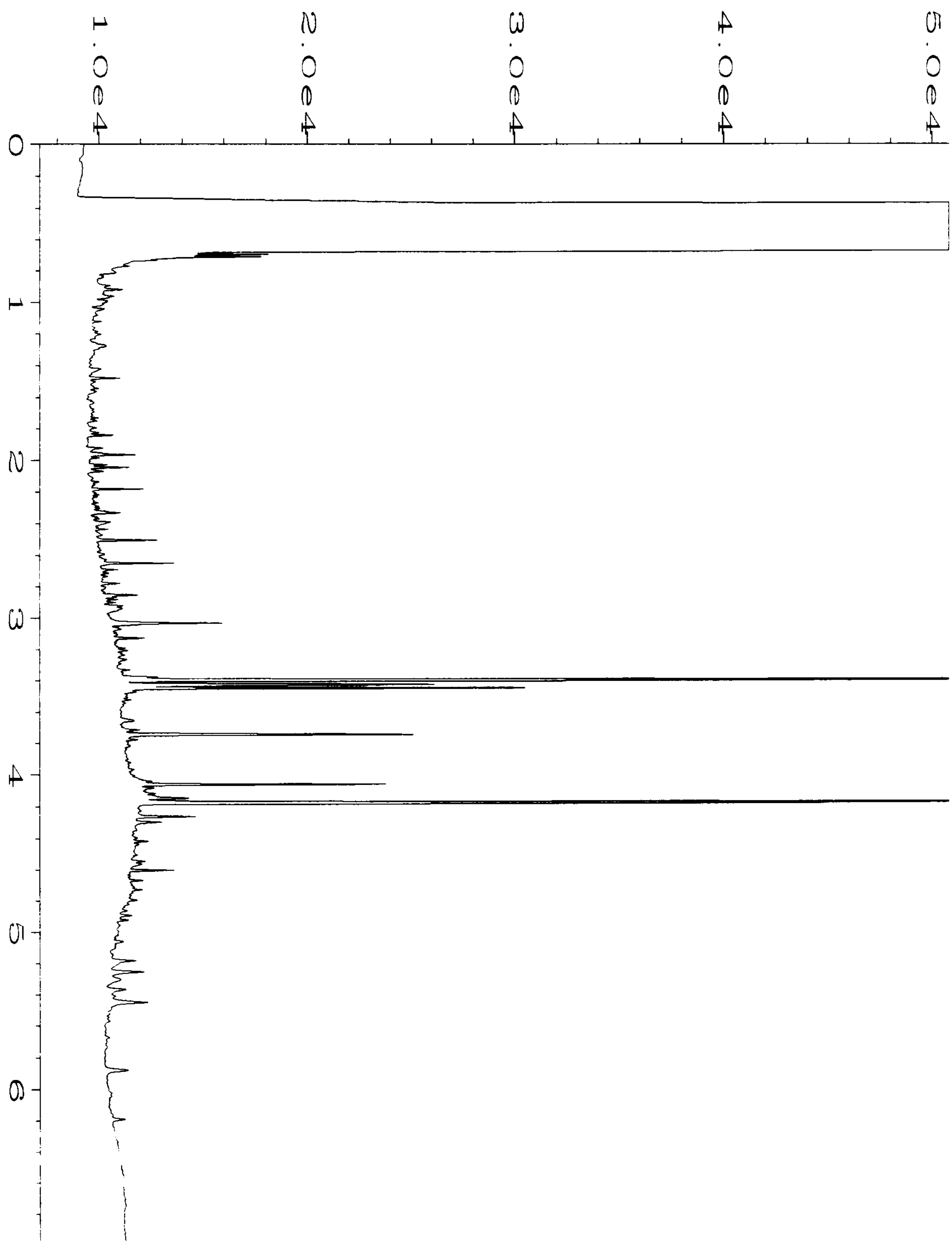
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

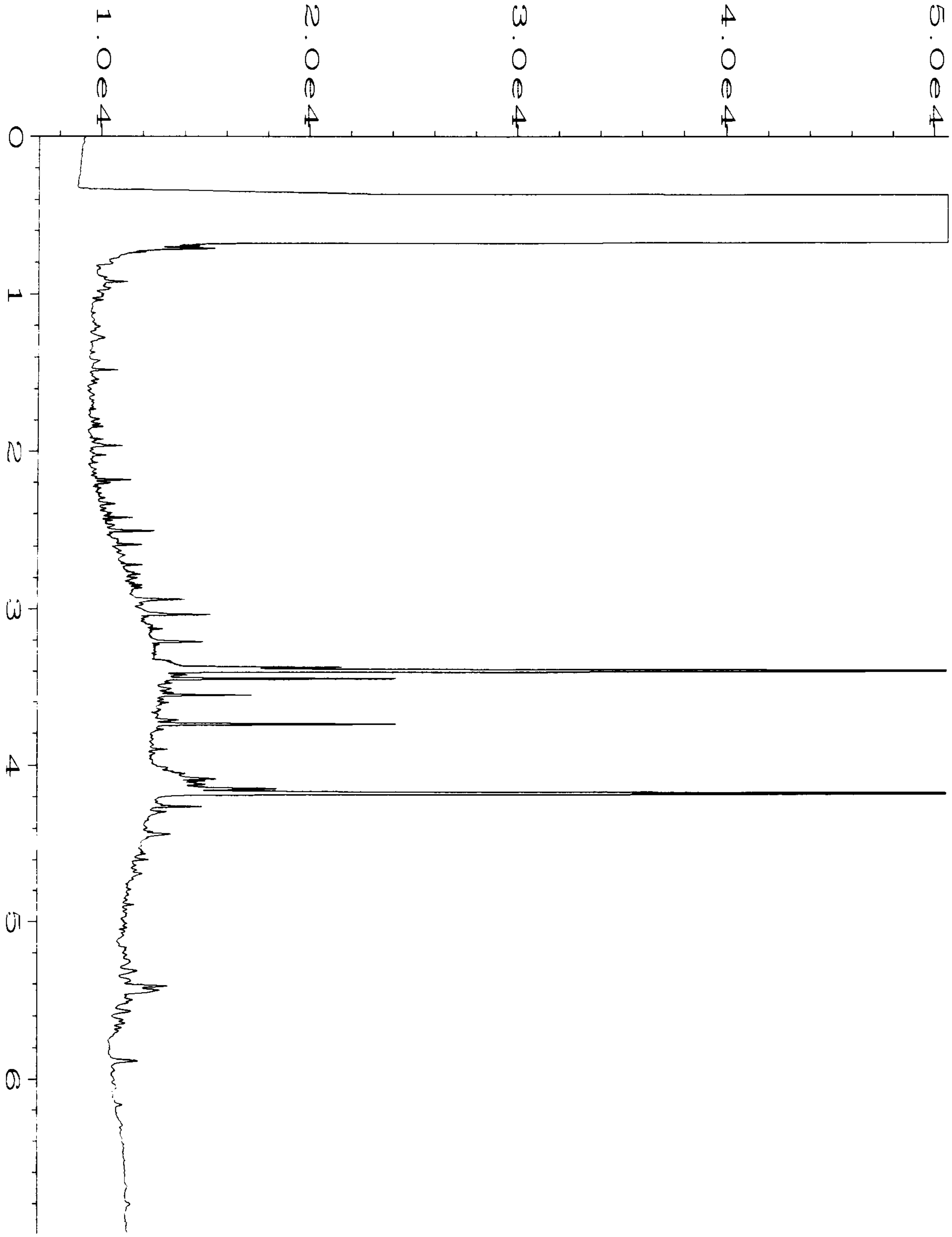
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.



Data File Name	: C:\HPCHEM\6\DATA\03-04-16\055F1001.D			
Operator	: mwdl		Page Number	: 1
Instrument	: GC #6		Vial Number	: 55
Sample Name	: 603066-01		Injection Number	: 1
Run Time Bar Code:			Sequence Line	: 10
Acquired on	: 04 Mar 16	08:38 PM	Instrument Method:	DX.MTH
Report Created on:	07 Mar 16	09:57 AM	Analysis Method	: DX.MTH



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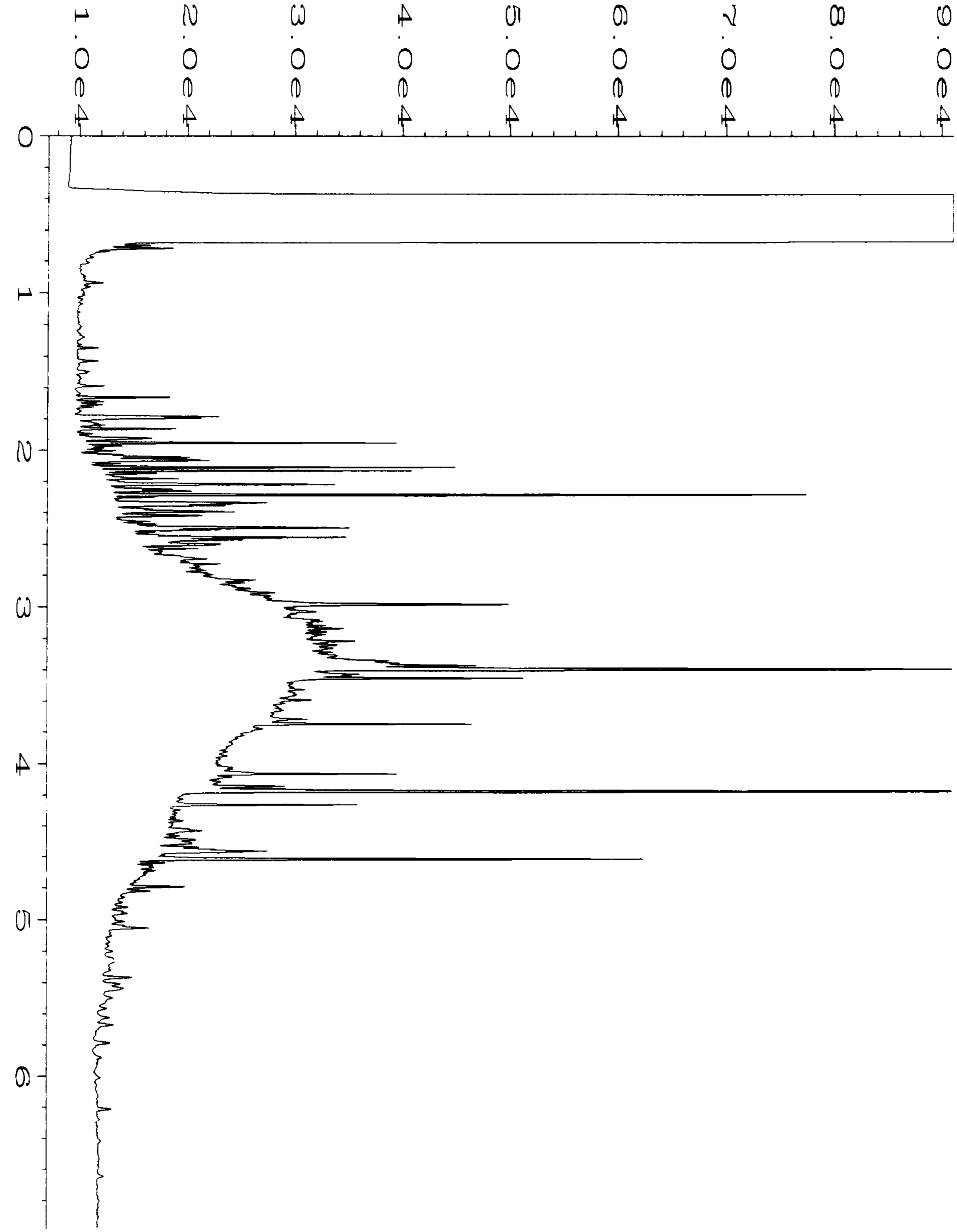
Operator   : mwdl
Instrument   : GC #6
Sample Name   : 603066-02
Run Time Bar Code:
Acquired on   : 04 Mar 16   08:49 PM
Report Created on: 07 Mar 16   09:57 AM

Page Number   : 1
Vial Number   : 56
Injection Number : 1
Sequence Line   : 10
Instrument Method: DX.MTH
Analysis Method   : DX.MTH



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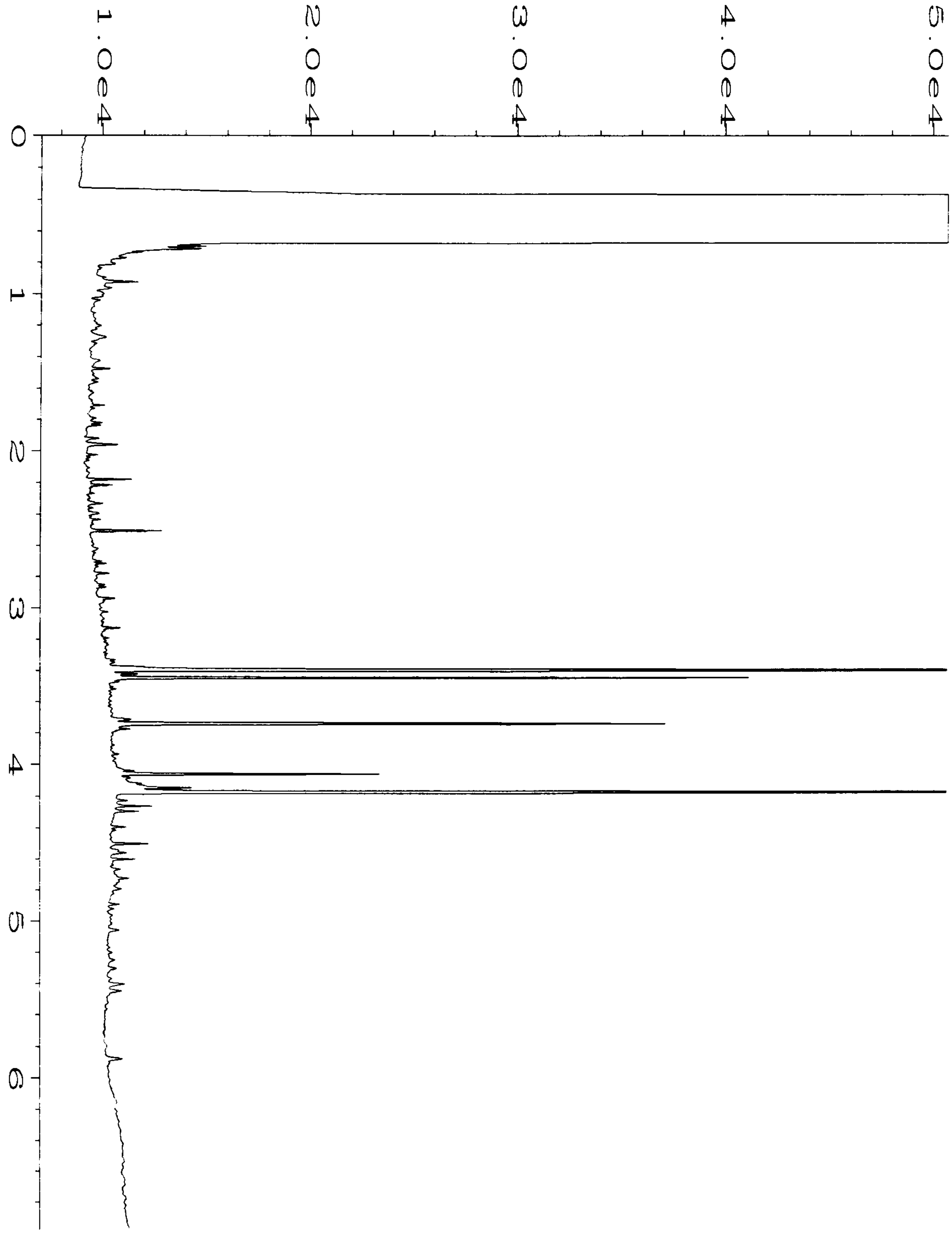
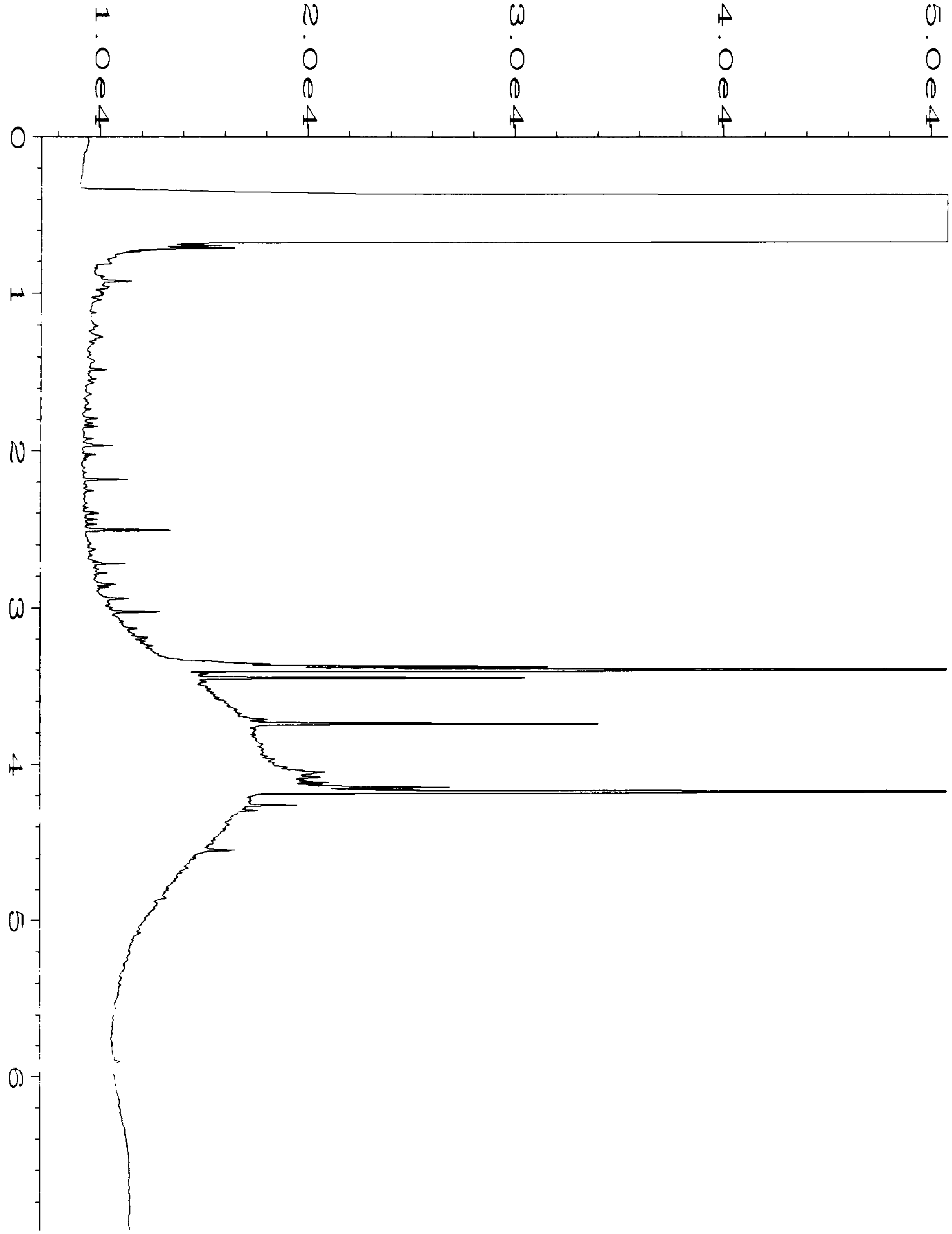
Operator	: mwdl	Page Number	: 1
Instrument	: GC #6	Vial Number	: 57
Sample Name	: 603066-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 04 Mar 16 09:00 PM	Instrument Method:	DX.MTH
Report Created on:	07 Mar 16 09:57 AM	Analysis Method	: DX.MTH

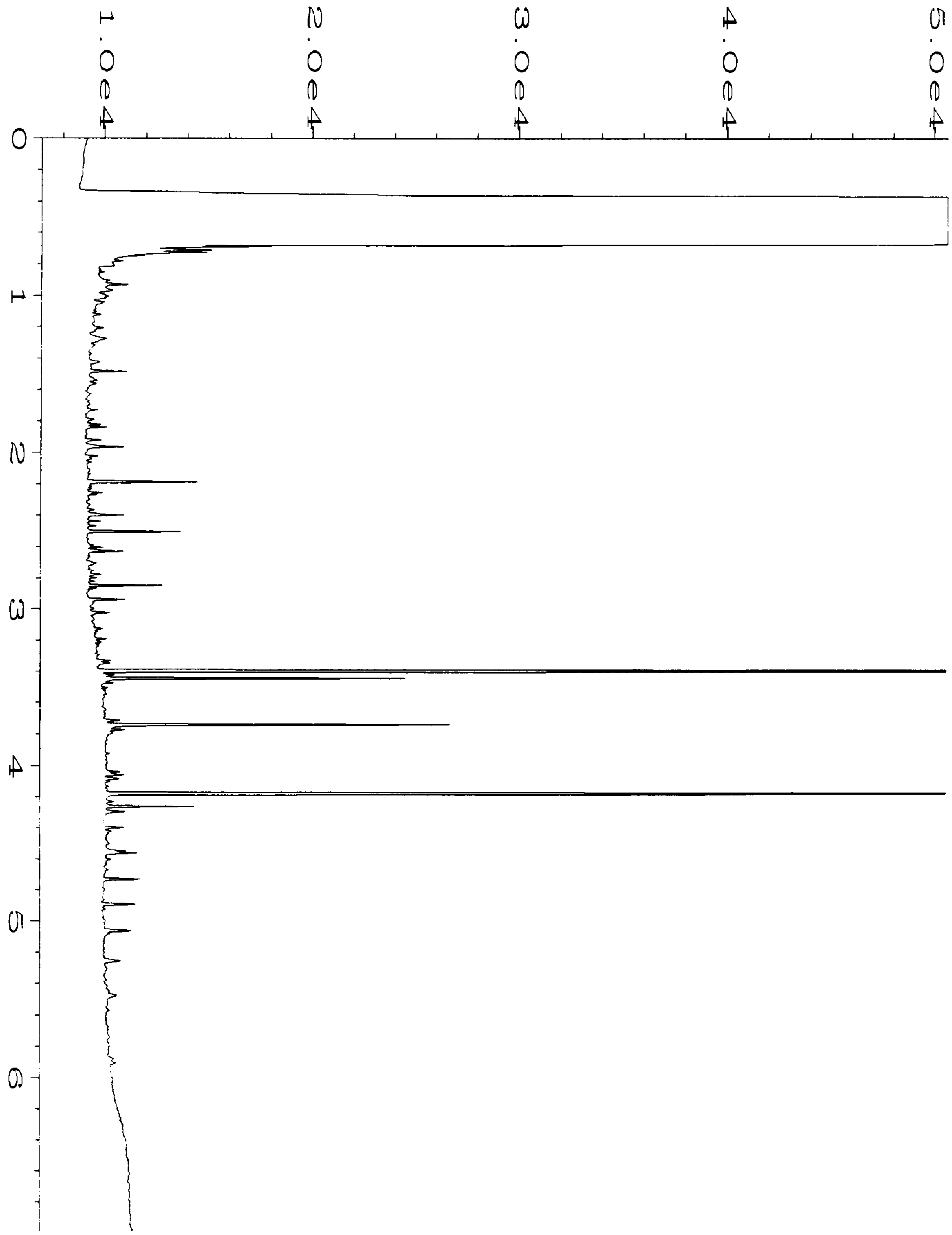


Data File Name : C:\HPCHEM\6\DATA\03-04-16\058F1001.D
Operator : mwdl
Instrument : GC #6
Sample Name : 603066-04
Run Time Bar Code:
Acquired on : 04 Mar 16 09:10 PM
Report Created on: 07 Mar 16 09:58 AM

Page Number : 1
Vial Number : 58
Injection Number : 1
Sequence Line : 10
Instrument Method: DX.MTH
Analysis Method : DX.MTH

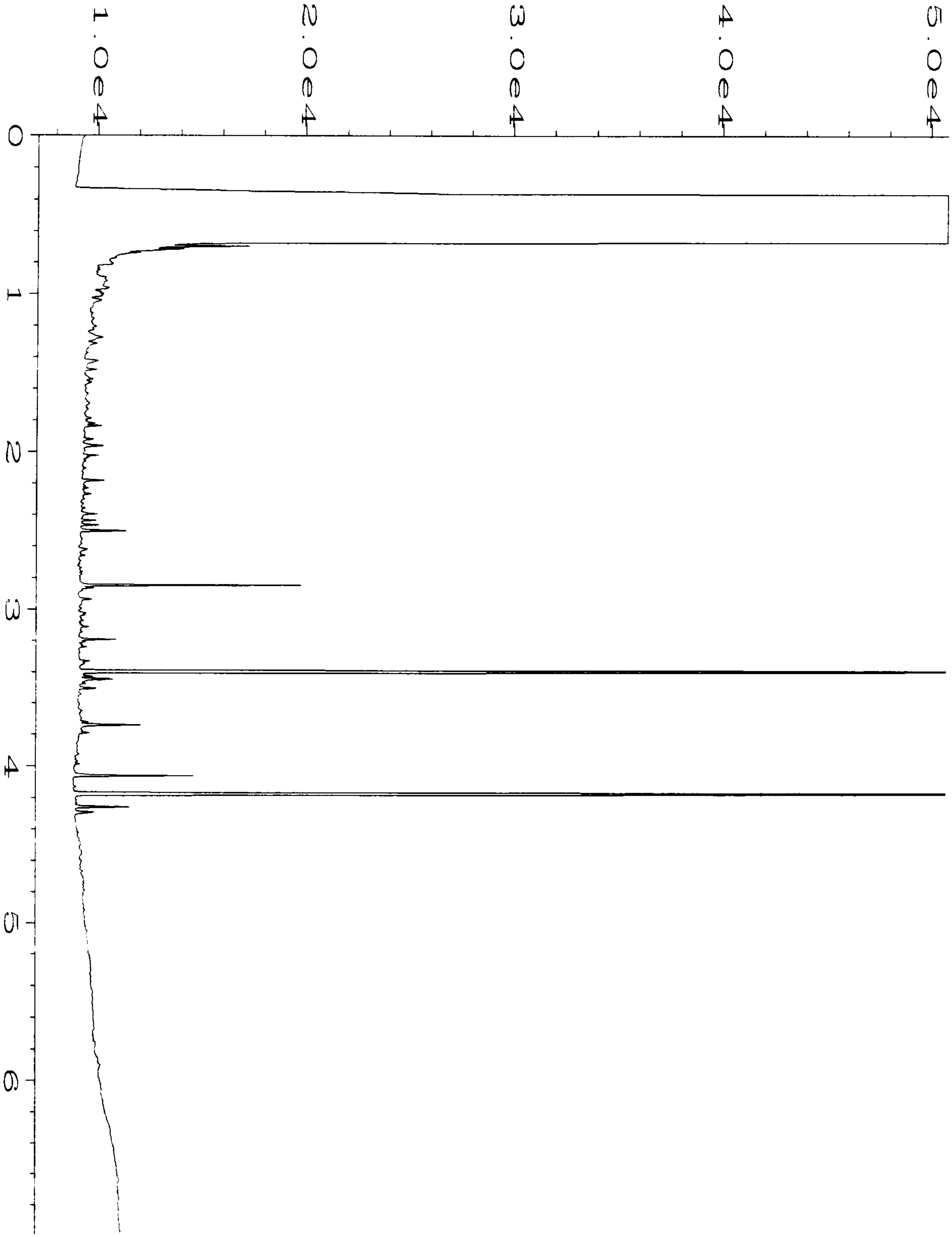


Data File Name	:	C:\HPCHEM\6\DATA\03-04-16\059F1001.D			
Operator	:	mwdl	Page Number	:	1
Instrument	:	GC #6	Vial Number	:	59
Sample Name	:	603066-05	Injection Number	:	1
Run Time Bar Code:			Sequence Line	:	10
Acquired on	:	04 Mar 16 09:21 PM	Instrument Method	:	DX.MTH
Report Created on	:	07 Mar 16 09:58 AM	Analysis Method	:	DX.MTH



Data File Name : C:\HPCHEM\6\DATA\03-04-16\060F1001.D
Operator : mwdl
Instrument : GC #6
Sample Name : 603066-06
Run Time Bar Code:
Acquired on : 04 Mar 16 09:32 PM
Report Created on: 07 Mar 16 09:58 AM

Page Number : 1
Vial Number : 60
Injection Number : 1
Sequence Line : 10
Instrument Method: DX.MTH
Analysis Method : DX.MTH



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Operator	: mwdl	Page Number	: 1
Instrument	: GC #6	Vial Number	: 52
Sample Name	: 06-418 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
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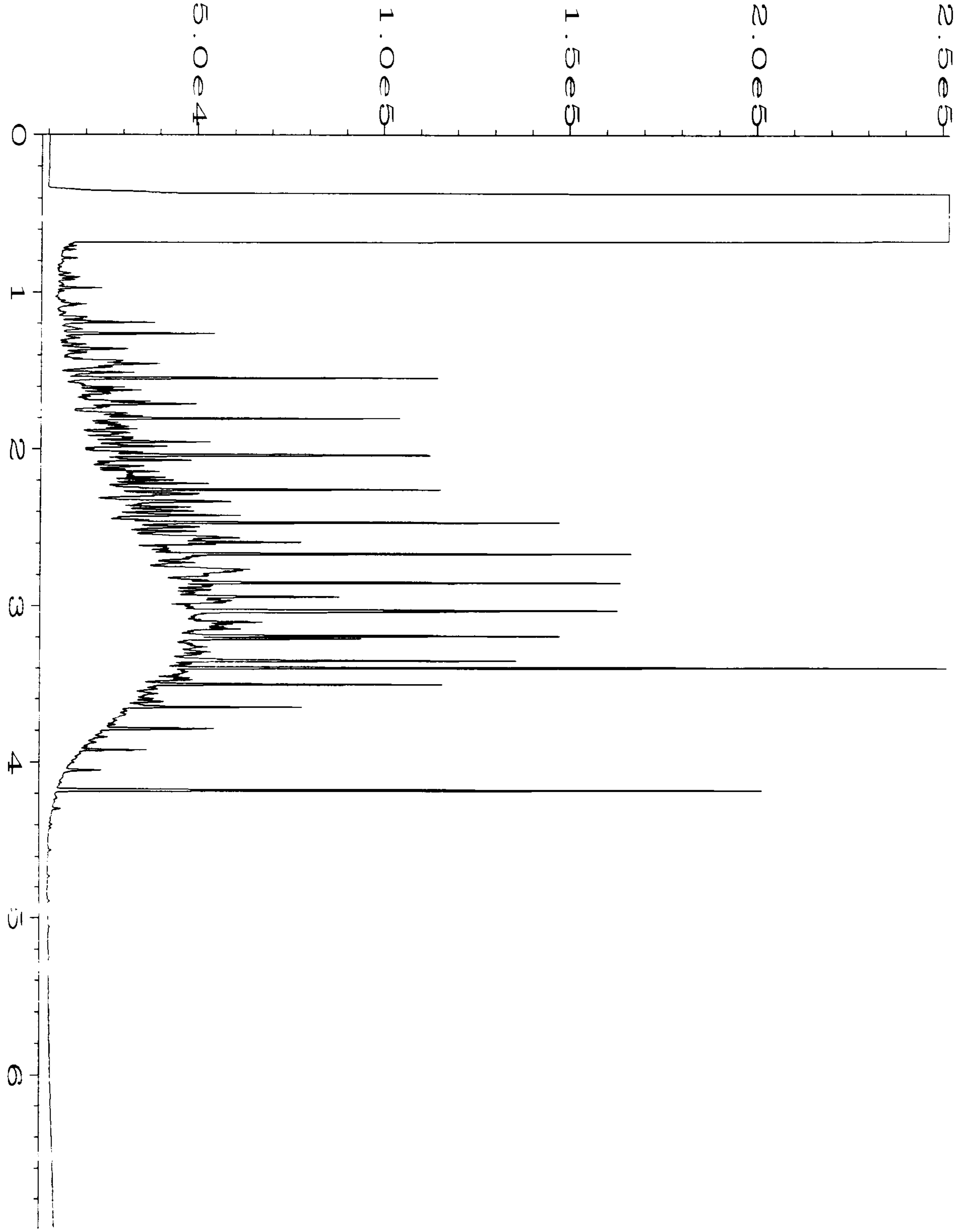
Report Created on:	07 Mar 16 09:58 AM	Analysis Method	: DX.MTH



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Operator	: mwdl	Page Number	: 1
Instrument	: GC #6	Vial Number	: 3
Sample Name	: 500 Dx 45-182D	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 04 Mar 16 07:47 AM	Instrument Method:	DX.MTH
Report Created on:	07 Mar 16 09:59 AM	Analysis Method	: DX.MTH

603066

SAMPLE CHAIN OF CUSTODY

ME 03/03/16 D04

Send Report To Doug Kunkel

Company EPI

Address 1180 nw maple St Suite 310

City, State, ZIP Issaquah, WA

Phone # 425-395-0010 Fax # ______

SAMPLERS (*signature*)

PROJECT NAME/NO. 61901

PO#

REMARKS

Page # 1 of 1

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
mw-3	01	3/3/16	1024	water	1	X												
mw-4	02	3/3/16	1054	water	1	X												
mw-6	03	3/3/16	1127	water	1	X												
mw-5	04	3/3/16	1153	water	1	X												
mw-1	05	3/3/16	1219	water	1	X												
mw-2	06	3/3/16	1238	water	1	X												

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:	Joe Sherrod	EPI	3/3/16	1400
Received by:	Michael Erdahl	F&Bru	↓	1608
Relinquished by:				
Received by:		Samples received at	5 °C	

FORMS\COC\COC.DOC

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

July 29, 2016

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: June 2016 Groundwater Sampling Report – Nineteenth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *June 2016 Groundwater Sampling Report – Nineteenth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012 a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998 analytical data for groundwater samples from the Site indicate that MW-1 has the greatest and most consistently detected concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH). The data indicated that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs.

The success of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until sometime in June when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not running during the June 21, 2016 groundwater sampling event and inspection revealed that the compressor motor was damaged beyond repair due to overheating. Upon questioning onsite workers EPI was informed that the system had been off for several weeks prior to the sampling event. EPI has instructed the onsite workers to immediately inform EPI or the property owner in the event of a system shut down in the future should one occur.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. This is significantly lower than the standard of 220-230 volts. Although the compressor motor was rated to operate down to 208 volts it is likely that short-term voltage drops caused the motor to over-amp, which resulted in excessive heat that eventually seized the motor.

GROUNDWATER SAMPLING PROCEDURES

The 19th round of groundwater sampling includes sampling all six monitoring wells. All wells were sampled because recent operation of the remediation system and seasonal effects have the potential to affect groundwater flow rates and directions. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

On June 21, 2016 EPI sampled all six monitoring wells at the Site as part of the current quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 89.50 feet Site Datum (EPI 2013 surveyed elevations) in MW-4 to 89.64 feet in MW-1.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the sampling event as shown in Figure 3. These groundwater contours and flow directions are generally consistent with historical data. Groundwater levels were not affected by the air injection system operation during this monitoring event since the system had been off for several weeks prior to sampling.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B.

- DO measurements range from 0.40 milligrams per liter (mg/L) in purge water from MW-5 to 4.82 mg/L in purge water from MW-1. Low measured DO concentrations in purge water from the wells indicates anaerobic (reducing) geochemical conditions. The higher measured DO concentration at MW-1 is likely due to residual increased oxygen levels corresponding to the recent operation of the air injection system.

- ORP measurements ranged from -87.5 millivolts (mV) in purge water from MW-6 to 38.5 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater, while positive ORP measurements indicate more aerobic geochemical conditions, likely resulting from recent operation of the air injection system near MW-1.

- Field-measured pH values for purge water from the wells ranged from 5.88 in purge water from MW-2 to 6.36 in purge water from MW-6. The low pH value measured at well MW-2 is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics, including petroleum hydrocarbons. The carbon dioxide generated by this naturally occurring process will form carbonic acid in the localized groundwater near the air injection system.

- HRPH was not detected in any of the groundwater samples collected during this sampling event.

- DRPH was detected in five of the six samples collected from the monitoring wells during this sampling event. The concentrations of DRPH did not exceed the MTCA Method A CUL of 500 μg/L in any of the samples collected from monitoring wells, with the exception of MW-6, which contained DRPH concentrations of 650 μg/L. DRPH was not detected in the sample collected from MW-5.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- Low DO and negative ORP measurements in purge water from MW-6 indicate that the air injection system has not yet established aerobic geochemical conditions at that location. The air injection well closest to MW-6 is the farthest from the blower and has greater piping head loss than other injection wells in the system reducing air flow to the subsurface compared to the other air injection wells.

- HRPH was not detected in any of the groundwater samples during this sampling event.

- DRPH was detected in samples from five of the six wells sampled. Only the sample from MW-6 slightly exceeded the MTCA Method A CUL.

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event since August 2011.

- DRPH concentrations in samples from MW-6 exceeded the Method A Groundwater CUL during this quarterly monitoring event. The June 2016 concentration of 650 µg/L is only slightly greater than the CUL and remains relatively consistent with the previous sampling events.

Samples from MW-3, MW-4, and MW-5 have never exceeded MTCA Method A CULs for DRPH or HRPH. In addition, there has only been one sample from MW-2 with a MTCA Method A CUL exceedance (HRPH at 730 µg/L in August 2012). The consistent long-term compliance with the MTCA Method A CUL for DRPH and the single isolated historical exceedance of the MTCA Method A CUL for HRPH suggests that a less frequent sampling schedule is warranted for MW-2, MW-3, MW-4, and MW-5. We therefore recommend a semiannual sampling schedule for these four wells with quarterly sampling retained at MW-1 and MW-6.

Analytical and field data from MW-1 demonstrate that the air injection technology used at the site is capable of creating aerobic geochemical conditions and promoting increased biodegradation of the DRPH in groundwater. Air injection system operation near MW-6 has not been sustained for a sufficiently long period to make a valid assessment of whether or not the expanded system is capable of similar success at that location.

Sustained operation of the air injection system has been problematic at the site as demonstrated by compressor motors damaged by overheating. The likely problem is that the site, and the surrounding area, has 208-volt electrical power, which can cause electrical motors to overheat due to increased amperage to make up for the low voltage. EPI is currently evaluating alternative replacement electrical components that are rated for continuous operation at voltages lower than 208 volts for the air injection system.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

State of Washington
Hydrogeologist
280
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1	Summary of Groundwater Stabilization Parameters
Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Air Injection Remediation System Layout
Figure 3	June 21, 2016 Groundwater Elevations, and Flow Directions

Attachments

Attachment A	Field Notes and Forms
Attachment B	Analytical Laboratory Report

Tables

Table 1: Summary of Groundwater Stabilization Parameters

Estes West Express Facility

2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	06/21/16	5.82	95.46	89.64	6.26	0.218	4.82	15.64	38.5	NM
MW-2	06/21/16	5.95	95.52	89.57	5.88	0.37	0.74	15.11	6.9	NM
MW-3	06/21/16	5.93	95.47	89.54	6.07	0.505	0.90	15.72	-82.5	NM
MW-4	06/21/16	6.11	95.61	89.50	6.01	0.933	0.49	15.25	-30.2	NM
MW-5	06/21/16	5.96	95.58	89.62	6.12	0.379	0.40	15.35	-49.0	NM
MW-6	06/21/16	5.91	95.44	89.53	6.36	0.523	0.52	16.60	-87.5	NM

Notes:

NM = Not Measured

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

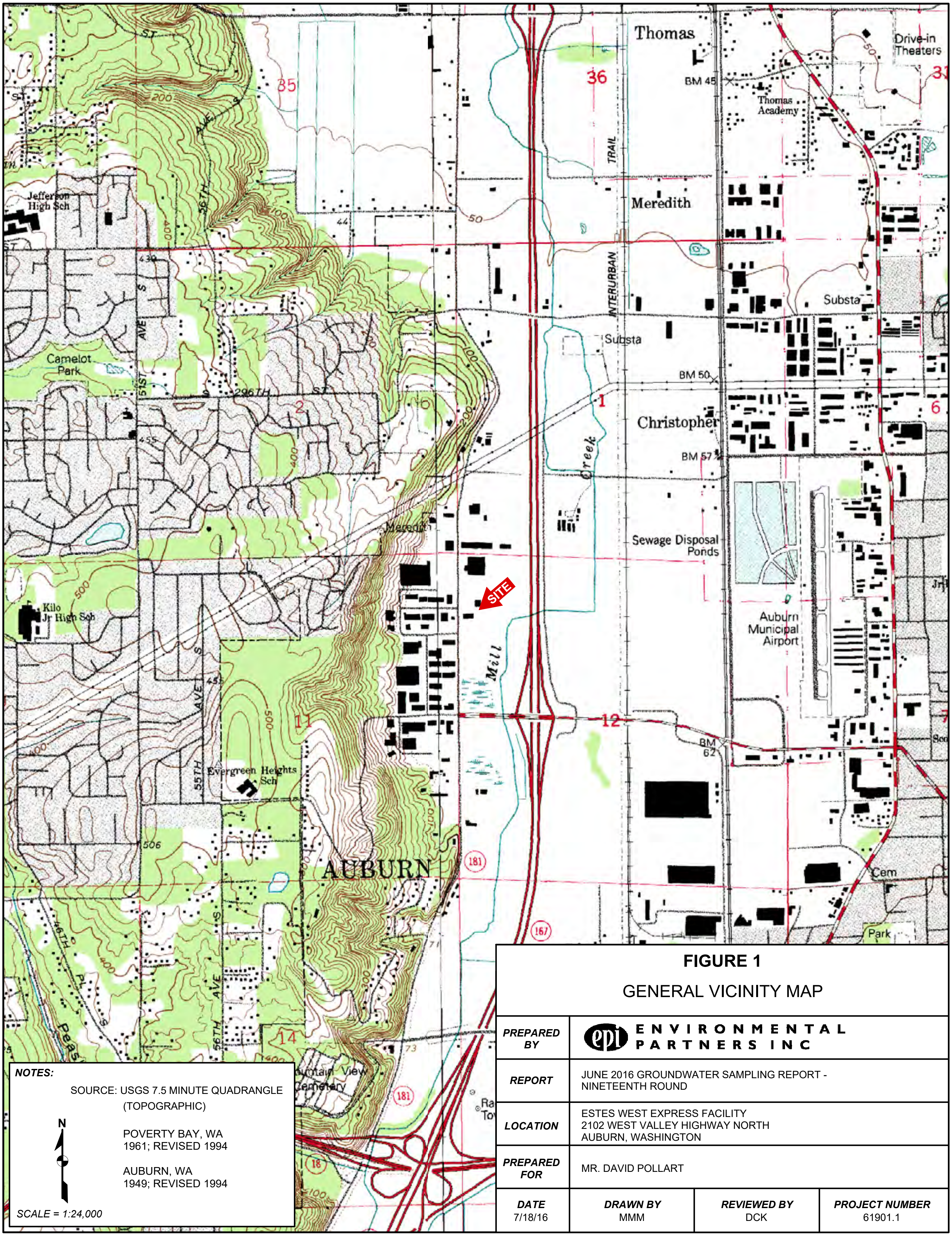
Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**700**	**290**	NA			
	3/3/16	NA	**220**	<250	NA			
	6/21/16	NA	**160**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250	NA			
	6/29/15	NA	**97**	<250	NA			
	9/28/15	NA	**150**	<250	NA			
	3/3/16	NA	<50	<250	NA			
	6/21/16	NA	**86**	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250	NA			
	6/29/15	NA	**130**	<250	NA			
	9/28/15	NA	**110**	<250	NA			
	3/3/16	NA	**92**	<250	NA			
	6/21/16	NA	**85**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[(a)]	DRPH[(b)]	HRPH[(b)]	Benzene[(c)]	Toluene[(c)]	Ethylbenzene[(c)]	Total Xylenes[(c)]
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**220**	<250	NA			
	3/3/16	NA	**130**	<250	NA			
	6/21/16	NA	**63**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250	NA			
	6/29/15	NA	<50	<250	NA			
	9/28/15	NA	<50	<250	NA			
	3/3/16	NA	<50	<250	NA			
	6/21/16	NA	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1,200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250	NA			
	6/29/15	NA	**750**	<250	NA			
	9/28/15	NA	**610**	<250	NA			
	3/3/16	NA	**1,100**	**390**	NA			
	6/21/16	NA	**650**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[(d)]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

(a) Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(b) Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
(c) Analyzed using EPA Method 8021B
(d) Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
= Concentration is greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

N

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	JUNE 2016 GROUNDWATER SAMPLING REPORT - NINETEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
7/18/16	MMM	DCK	61901.1

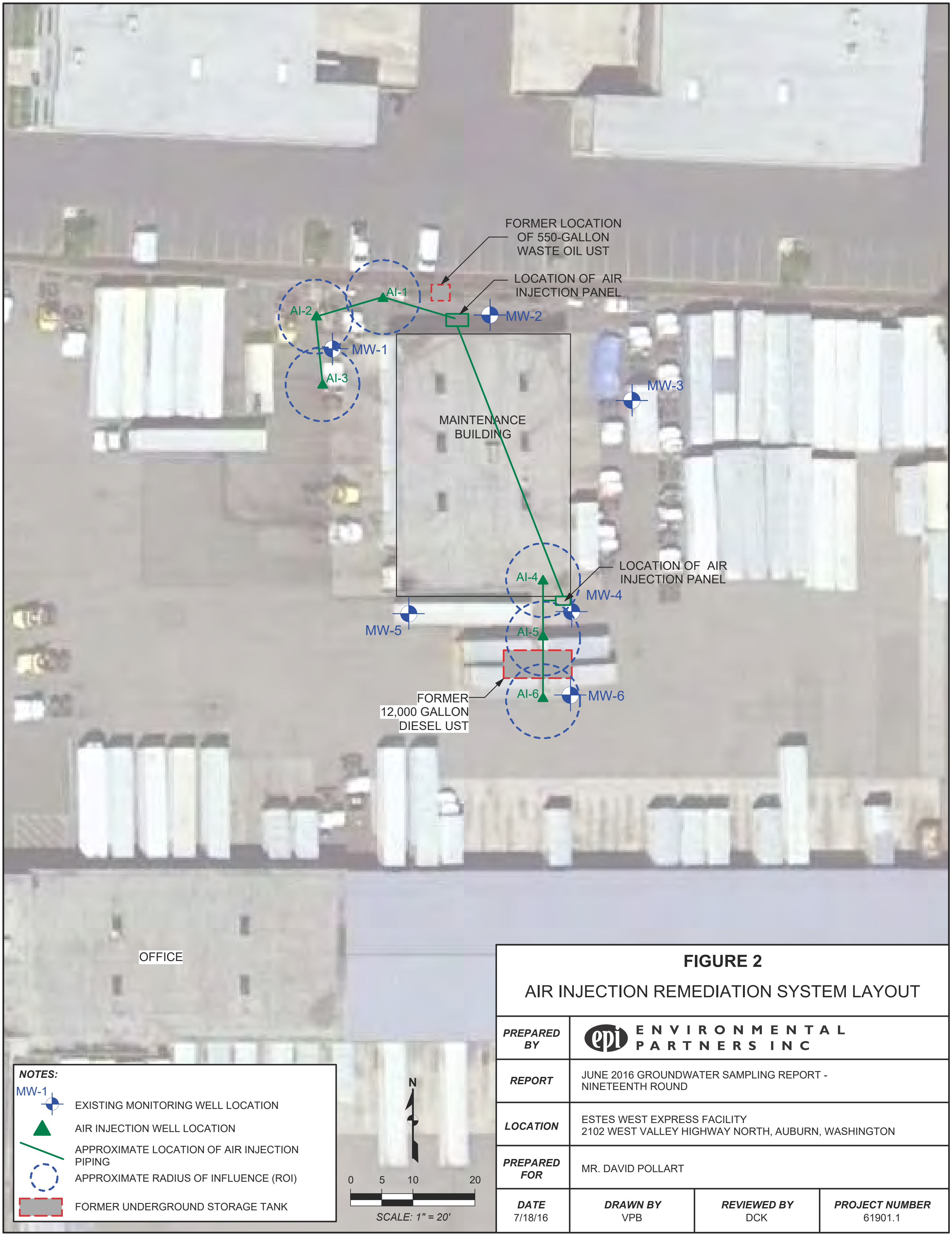
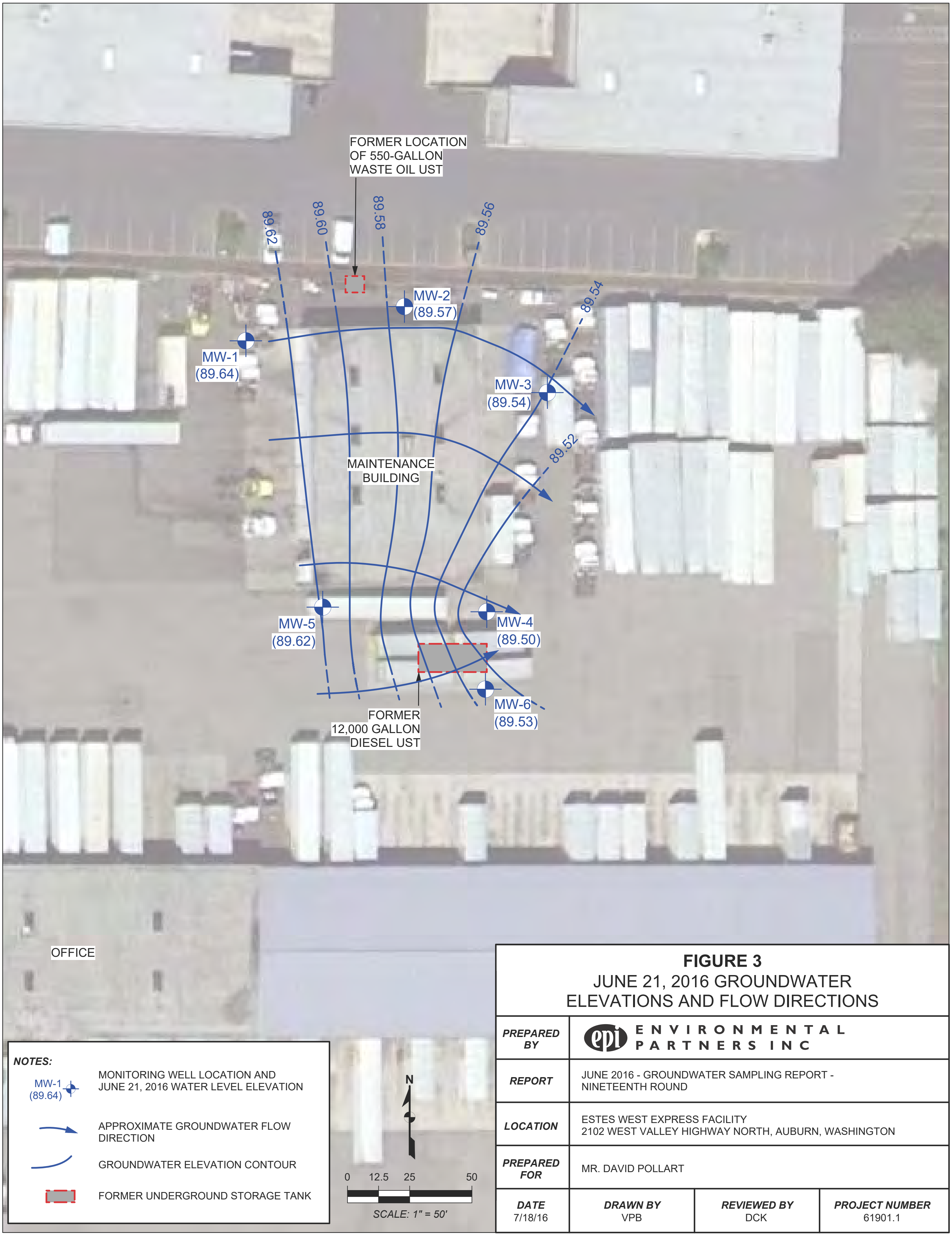


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	JUNE 2016 GROUNDWATER SAMPLING REPORT - NINETEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
7/18/16	VPB	DCK	61901.1



NOTES:

MW-1 (89.64)	MONITORING WELL LOCATION AND JUNE 21, 2016 WATER LEVEL ELEVATION
	APPROXIMATE GROUNDWATER FLOW DIRECTION
	GROUNDWATER ELEVATION CONTOUR
	FORMER UNDERGROUND STORAGE TANK

FIGURE 3

JUNE 21, 2016 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2016 - GROUNDWATER SAMPLING REPORT - NINETEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 7/18/16	**DRAWN BY** VPB	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

Attachment A
Field Notes and Forms

6/2/16 Scope: groundwater monitoring

1200 J. Sherrod on-site, compressor

☆ not working, appears to have mechanically failed.

Well ID	DTW
MW-2	5.95'
MW-1	5.82'
MW-5	5.96'
MW-6	5.91'
MW-4	6.11'
MW-3	5.93'

1245 Calibrate YSI

1410 After speaking with on-site personel, the pump was last seen working friday 5/27/16. The pump was not working 5/31/16. Compressor shows ~~compress~~ breaker with shop compressor.

1500 New drum used, existing drum was full, 6 gallons of water was purged this event.

1520 J. Sherrod off-site

EPI Groundwater Sampling Field Data

Project Name: Estes West
Monday - Stopped
Project Number: 61901

Well ID:	MW-4	Date	6/2/16
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	1345
End Time	1409
Total Gallons Purged	1.7

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1350	0.2	6.05	1.130	3.09	15.57	-21.7	—	Clear
1353	0.4	5.89	1.101	0.75	15.60	-15.7	—	clear
1356	0.6	5.89	1.066	0.65	15.41	-16.7	—	Clear
1359	0.9	5.91	1.037	0.59	15.29	-18.7	—	clear
~~14~~1402	1.1	5.95	0.987	0.49	15.20	-23.2	—	clear
1405	1.3	5.97	0.968	0.49	15.22	-25.6	—	clear
1408	1.5	6.01	0.933	0.49	15.25	-30.2	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1409	1/2 L Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-6	Date	6/2/16
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	1413
End Time	1435
Total Gallons Purged	1.2

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1418	0.1	6.36	0.539	2.86	16.73	-65.1	—	clear
1421	0.3	6.37	0.532	1.30	16.78	-82.2	—	clear
1424	0.5	6.36	0.528	0.93	16.71	-84.3	—	clear
1427	0.7	6.37	0.526	0.73	16.49	-85.8	—	clear
1430	0.9	6.35	0.524	0.59	16.54	-86.1	—	clear
1433	1.1	6.36	0.523	0.52	16.60	-87.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1434	1/2 L poly	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-5	Date	6/2/16
Sample ID:	MW-5	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1442
End Time	1457
Total Gallons Purged	1.0

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1443	0.1	6.45	0.335	4.16	15.24	-49.6	—	clear
1446	0.3	6.24	0.370	0.76	15.28	-46.7	—	clear
1449	0.5	6.12	0.375	0.46	15.40	-45.5	—	clear
1452	0.7	6.11	0.377	0.42	15.36	-46.6	—	clear
1455	0.9	6.12	0.379	0.40	15.35	-49.0	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1456	1/2 L Amber ~~Poly~~	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-2	Date	6/2/16
Sample ID:	MW-2	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______________

Start Time	1502
End Time	1523
Total Gallons Purged	1.2

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1505	0.1	6.12	0.359	3.26	14.90	-3.6	—	Clear
1508	0.3	5.87	0.359	0.78	14.78	9.3	—	Clear
1511	0.5	5.79	0.359	0.68	15.03	10.7	—	Clear
1514	0.7	5.80	0.360	0.67	15.14	8.3	—	Clear
1517	0.9	5.86	0.367	0.74	15.15	8.4	—	Clear
1520	1.1	5.88	0.370	0.74	15.11	6.9	—	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1521	1/2 L Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-3	Date	6/2/16
Sample ID:	MW-3	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume (2"=0.163 x depth) (4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: ______

Start Time	1320
End Time	1345
Total Gallons Purged	1.8

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1325	0.2	5.92	0.574	1.58	16.46	-81.2	—	clear
1328	0.5	5.94	0.543	1.36	15.50	-82.4	—	clear
1331	0.8	5.96	0.527	1.26	15.61	-80.5	—	clear
1334	1.1	6.00	0.521	1.09	15.77	-80.4	—	clear
1337	1.4	6.06	0.511	1.07	15.82	-81.7	—	clear
1340	1.7	6.07	0.505	0.90	15.72	-82.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1341	1/2 Ltr Amb		

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-1	Date	6/2/16
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	1520
End Time	1550
Total Gallons Purged	1.5

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1529	0.2	6.58	0.223	6.00	15.60	-11.0	—	Clear
1532	0.4	6.45	0.222	5.59	15.69	2.6	—	clear
1535	0.6	6.36	0.223	5.42	15.62	20.7	—	clear
1538	0.8	6.34	0.222	5.24	15.63	24.0	—	clear
1541	1.0	6.33	0.220	4.85	15.61	28.8	—	clear
1544	1.2	6.30	0.220	4.91	15.52	33.9	—	clear
1547	1.4	6.26	0.218	4.82	15.64	38.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
Dx	1548	1/2 Ltr Amb.	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment B
Analytical Laboratory Report

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

June 9, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 606052

Dear Mr. Kunkel:

Included are the results from the testing of material submitted on June 3, 2016 from the 61901, F&BI 606052 project. There are 4 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
EPI0609R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 3, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 606052 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
606052-01	MW-3
606052-02	MW-4
606052-03	MW-6
606052-04	MW-5
606052-05	MW-2
606052-06	MW-1

All quality control requirements were acceptable.

Date of Report: 06/09/16
Date Received: 06/03/16
Project: 61901, F&BI 606052
Date Extracted: 06/03/16
Date Analyzed: 06/03/16

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 47-140)
MW-3 606052-01	85 x	<250	100
MW-4 606052-02	63 x	<250	110
MW-6 606052-03	650 x	<250	107
MW-5 606052-04	<50	<250	106
MW-2 606052-05	86 x	<250	104
MW-1 606052-06	160 x	<250	98
Method Blank 06-1138 MB2	<50	<250	91

Date of Report: 06/09/16
Date Received: 06/03/16
Project: 61901, F&BI 606052

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	109	107	61-133	2

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.

606052

SAMPLE CHAIN OF CUSTODY

ME 06/03/16 E03

Page 1 of 1

Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98027

Phone 425-395-0010 Email dougk@epi-wa.com

SAMPLERS (signature)	
PROJECT NAME 61901	PO #
REMARKS	INVOICE TO

TURNAROUND TIME
- ☑ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	NWTPH-Dx				Notes
MW-3	01	6/2/16	1341	Water	1								X				
MW-4	02		1409														
MW-6	03		1434														
MW-5	04		1456														
MW-2	05		1521														
MW-1	06		1548														
																	Samples received at 4 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Sherrod	EPI	6/3/16	0600
Received by:	Michael Erdahl	F&Binc	6/3/16	0620
Relinquished by:				
Received by:				

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

February 24, 2017

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: September and December 2016 Groundwater Sampling Report – Twentieth and Twenty-First Rounds
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *September and December 2016 Groundwater Sampling Report – Twentieth and Twenty-First Rounds* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012, a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. Available information indicates that the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a groundwater sample from the bottom of the UST excavation during decommissioning activities.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998, analytical data for groundwater samples from the Site indicate that MW-1 has the greatest and most consistently detected concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH). The data indicate that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014, EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately-sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs.

The success of the air injection remediation system at MW-1 demonstrated that warranted expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed like the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until sometime in June 2015 when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement. In addition, the air distribution manifold serving the air injection wells near MW-6 was damaged by the tenant and was repaired and restored to operation.

The electrical issue has been identified as low voltage, measured at 208 volts, in the area, which causes the compressor motor to over-amp and eventually overheat. On November 16, 2016, a new compressor rated for continuous operation under low voltage power supplies was installed, tested, and returned to continuous operation.

AUGUST 2016 SOIL BORINGS AND CONDITIONAL POINT OF COMPLIANCE WELL INSTALLATION

On August 26, 2016, EPI oversaw the drilling and sampling of two soil borings, designated BH-1 and BH-2; and the installation of two conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. BH-1 and BH-2 were drilled east of the former diesel UST to evaluate subsurface conditions immediately downgradient of the former UST. POC well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel UST and existing well MW-6. Well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel UST and existing well MW-6. The purpose of the POC monitoring wells is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST, which is a source area for diesel impacts to groundwater at the Site. Figure 2 shows the locations of borings and monitoring wells relative to Site features.

Geology

The surface of the Site was generally covered with asphalt with compacted gravel subgrade to a depth of approximately 6 inches. Groundwater was encountered at all four soil borings at depths from 6.1 to 7.5 feet bgs. Subsurface geologic conditions consisted of the following:

- Sandy Silt with Gravel (ML) from approximately 6 inches to 6 to 10 feet below ground surface (bgs) in BH-1 and BH-2, respectively. The Sandy Silt with Gravel (ML) is underlain by Poorly-Graded Sand with Silt (SP-SM) to 15 ft. bgs, which was the maximum depth of exploration at these locations.

- Boring logs for MW-7 and MW-8 indicate the Sandy Silt with Gravel (ML) extends to approximately 6 ft. bgs at both locations and is underlain by Silt with Sand (ML) that extended to 12 to 14 feet bgs at MW-7 and MW-8, respectively. At MW-7, the Silt with Sand (ML) was underlain by Poorly-Graded Sand with Silt (SP-SM) from 12 feet to 14 feet bgs, the maximum depth of exploration.

Boring logs for the soil borings BH-1 and BH-2 and as-built diagrams for POC wells MW-7 and MW-8 are included in Attachment A.

Well Construction

New POC wells MW-7 and MW-8 are screened with a 2-inch diameter Schedule 40 PVC screen with 0.010-inch, machine-cut slots installed from 4 to 14 feet bgs. A sand filter pack was installed from the bottom of the boring (14 ft. bgs) to 1 foot above the top of the screened interval using 10-20 silica sand. The remainder of the well was sealed with hydrated bentonite chips and topped with a traffic-rated steel protective monument set in concrete. Each of the well casings was sealed with locking watertight caps, as required by Ecology resource protection well construction regulations. The as-built well diagrams are shown on the borelogs, which are included as Attachment A.

Well Development

Following installation, EPI developed the two new monitoring wells to remove fine material from the filter pack and well casing, which allows the wells to produce less turbid, more representative groundwater samples. The wells were developed with a decontaminated 12-volt submersible pump using a combination of surging and pumping. EPI field staff periodically measured and recorded field parameters during well development. Field-measured well development data are presented in Attachment B.

Well development was performed until purged water became visually clear and measured turbidity of less than 5 nephelometric turbidity units (NTUs) was achieved. In total, 25 gallons of water were purged out of MW-7 and 20 gallons of water were purged out of MW-8. Water development water was retained at the Site in 55-gallon steel drums, and will be profiled, as required, for proper handling and disposal.

Well Surveying

EPI field staff surveyed measuring point elevations for the two new monitoring wells at the Site. Consistent with the survey datum used previously, EPI field staff used the top of the bollard at the northwest corner of the maintenance building as a 100-foot elevation site-specific datum for the property. Measuring point elevations for the monitoring wells at the Site are summarized in Table 1.

SOIL SAMPLING

As part of the well installation, EPI staff collected soil samples from approximately 5.5 to 7.0 feet bgs at MW-7 and MW-8, which corresponds with the top of the water table at those locations. In addition, soil samples were collected at 5-foot intervals (5-, 10-, and 15-ft. bgs) at BH-1 and BH-2. Samples were collected using a 1.5-foot long split-spoon sampler, which was decontaminated between samples. The samples were screened in the field using a photoionization detector (PID) and the sample material with the greatest PID reading, if any, was collected for laboratory analysis. Drill cuttings were placed into steel drums, which are temporarily stored onsite pending profiling for disposal.

Soil samples from all four borings were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled soil sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. Samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment C.

Soil sample data are summarized in Table 2. None of the soil samples collected at the BH-1 and BH-2 boring locations or well MW-7 and MW-8 locations had detections of petroleum constituents at the listed reporting limits.

RECONNISANCE GROUNDWATER SAMPLING

EPI staff collected groundwater samples from BH-1 and BH-2 using a temporary PVC well screen. The temporary wells were screened from 5 to 15 feet bgs at both locations. Temporary wells were purged prior to sampling to reduce turbidity but stabilization parameters were not measured.

Groundwater samples from both borings were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of $4^{o}C$ or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment C.

Reconnaissance groundwater sample data are summarized in Table 2. Samples from both borings were non-detect for HRPH. Samples from BH-1 and BH-2 had detections of DRPH at concentrations of 490 and 1,000 µg/L, respectively. The DRPH detected in the sample from BH-2 at 1,000 µg/L exceeds its MTCA Method A CUL of 500 µg/L.

GROUNDWATER SAMPLING PROCEDURES

On September 16, 2016 and on December 20, 2016 EPI sampled all eight monitoring wells at the Site as part of the quarterly groundwater sampling program. EPI measured the depth to water and total depths of all monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. September groundwater elevations ranged from 89.05 feet Site Datum (EPI 2013 and EPI 2016 surveyed elevations) in MW-8 to 89.47 feet in MW-1. December groundwater elevations ranged from 89.01 feet Site Datum in MW-7 to 90.81 feet in MW-2. Groundwater elevations are presented in Table 1.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the September and December sampling events as shown in Figures 3 and 4, respectively. These groundwater contours and flow directions are generally consistent with historical data.

The air injection system was not in operation at the time of the September 2016 site visit and onsite workers indicated that it had been off since June 2016 as noted in the section titled **Remediation System Installation and Operation**. Therefore, groundwater levels were not affected by system operation during the September monitoring event. The air injection system was repaired and restarted in November 2016 and the December 2016 groundwater level measurements were obtained with the system running so they are affected by ongoing air injection operations.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was measured for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment C.

Purge water was transferred to a 55-gallon drum stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples from all eight wells were collected for DRPH and HRPH analyses using the NWTPH-Dx analytical method. As requested by Ecology, additional sample volumes from MW-6, MW-7, and MW-8 were collected for naphthalene analysis using Method 8260C. Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4°C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form and analytical report is included in Attachment D.

MW-4 AND MW-8 RE-SAMPLE

Initial analytical results from MW-4 and MW-8 indicated detected concentrations of petroleum hydrocarbons that appeared to be anomalous. In the case of data from MW-4, the concentrations of 750 µg/L and 1,700 µg/L for DRPH and HRPH, respectively, were significantly greater than the range of historical concentrations for samples from that well. For MW-8, the concentrations of 1,100 µg/L and 590 µg/L for DRPH and HRPH, respectively, were unexpected based on its distance from the source area near MW-6 (see Table 3).

Field staff noted that during the September sampling event both wells had loose-fitting well caps. It appeared that the loose caps might have allowed small volumes of surface water, potentially contaminated with DRPH and HRPH from the paved parking area, to enter groundwater affecting sample integrity. Within a few days of receiving the September analytical data EPI re-developed and resampled wells MW-4 and MW-8 and replaced the well caps. These tasks were performed to evaluate if the apparently anomalous detections were representative of groundwater conditions.

Groundwater samples (re-samples) from MW-8 and MW-4 were collected for DRPH and HRPH analyses on September 29, 2016 and October 3, 2016, respectively. Prior to the resampling event, approximately 5 gallons were purged from each well before sampling to remove potential surface water contamination, and the suspected leaky well caps were replaced with new watertight caps.

Analytical results from the MW-4 resample are within historical limits. DRPH was detected at a concentration of 68 μg/L, which is significantly less than the MTCA Method A CUL of 500 μg/L. HRHP was not detected in the resample, which is consistent with historical data from this well. Analytical results from the MW-8 resample indicate DRPH was detected at 290 μg/L, which does not exceed the MTCA Method A CUL of 500 μg/L. HRHP was not detected in the resample from MW-8.

The resample results from both MW-4 and MW-8 are consistent with the December sampling results for both wells confirming that the initial samples from September were anomalous and should not be considered representative of groundwater conditions. Therefore, the anomalous values from September 2016 in samples from MW-4 and MW-8 will be presented in Table 3 of this report but will not be presented in future reports. The anomalous data from MW-4 and MW-8 will not be included in time series graphs for the wells.

GROUNDWATER ANALYTICAL RESULTS

The following findings are based on a review of the September and December 2016 field parameter measurements presented in Table 1 and the analytical data presented in Table 3. Full laboratory data reports for both sampling events and the resampling data for MW-4 and MW-8 are presented in Attachment D.

Dissolved Oxygen

- September DO measurements range from 0.10 milligrams per liter (mg/L) in purge water from MW-5 to 0.64 mg/L in purge water from MW-4.

- December DO measurements range from 0.72 mg/L in purge water from MW-7 to 7.69 in purge water from MW-1.

- December DO measurements are greater than September DO measurements at all locations, most notably MW-1. This is likely due to renewed operation of the air injection system.

ORP

- September ORP measurements ranged from -62.3 millivolts (mV) in purge water from MW-6 to 95.5 mV in purge water from MW-1.

- December ORP measurements ranged from -46.1 mV in purge water from MW-6 to 12.6 mV in purge water from MW-2.

- Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater. Positive ORP measurements indicate more aerobic geochemical conditions, likely resulting from renewed operation of the air injection system.

pH

- Field-measured pH values for September in purge water from the wells ranged from 5.94 in purge water from MW-1 to 6.40 in purge water from MW-4.

- December pH values ranged from 5.79 in purge water from MW-2 to 6.65 in purge water from MW-1.

- The low pH value measured at well MW-1 in September is likely due to generation of carbon dioxide by enhanced bacterial decomposition of organics, including petroleum hydrocarbons. The carbon dioxide generated by this naturally occurring process will form carbonic acid in the localized groundwater near the air injection system. This low pH groundwater appears to have migrated to MW-2, which is approximately 25 feet downgradient of MW-1 (see Figure 3).

HRPH

- In September HRPH was detected in the samples from MW-1, MW-4, and MW-8 at concentrations of 420 μg/L, 1,700 μg/L, and 590 μg/L, respectively. The HRPH concentration in the sample from MW-1 is less than the MTCA Method A CUL of 500 μg/L.

- The HRPH results in the samples from MW-4 and MW-8 were anomalous and were non-detect at a reporting limit 250 μg/L when the wells were re-sampled shortly after receiving the September data.

- In December HRPH was non-detect in samples from all 8 monitoring wells.

DRPH

- In September DRPH was detected in samples from seven of the eight wells at concentrations that ranged from 68 μg/L to 1,100 μg/L in samples from MW-4 and MW-8, respectively. The DRPH concentration in the sample from MW-1 was 580 μg/L, which exceeds the MTCA Method A CUL of 500 μg/L.

- The September 16, 2016 DRPH results in the samples from MW-4 and MW-8 were anomalous and were 68 μg/L and 290 μg/L when the wells were re-sampled shortly after receiving the September data.

- In December DRPH was detected in samples from six of the eight wells at concentrations that ranged from 78 μg/L in samples from MW-4 and MW-7 to 190 μg/L in the sample from MW-1. All December DRPH concentrations were less than the MTCA Method A CUL of 500 μg/L.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this groundwater monitoring report.

- Low DO and negative ORP measurements in September purge water from MW-3, MW-5, and MW-6 indicate that the air injection system had not yet established aerobic geochemical conditions at those locations. Naturally-occurring low DO and negative ORP measurements noted in purge water from MW-7 and MW-8 are expected based on their distance from the active remediation system.

- December DO measurements were greater than September DO measurements in all 8 wells. This indicates that renewed operation of the air injection system, which was repaired and re-started in November, is creating more aerobic geochemical conditions, most notably at MW-1.

- In September, HRPH was detected in the sample from MW-1 at a concentration less than the MTCA Method A CUL. Re-sample results for MW-4 and MW-8 were non-detect for HRPH. The re-sample data demonstrate the original September 16th sample results for MW-4 and MW-8 were anomalous. HRPH was not detected in any samples collected during the December sampling event.

- In September, DRPH was detected in samples from seven of the eight wells sampled. Only the sample from MW-1 exceeded the MTCA Method A CUL. Re-sample results for MW-4 and MW-8 were less than the MTCA Method A CUL. The re-sample data demonstrate the original September 16th sample results for MW-4 and MW-8 were anomalous. In December, DRPH was detected in samples from six of the eight wells sampled. Only the sample from MW-6 exceeded the MTCA Method A CUL

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-2, MW-3, MW-4, and MW-5 have been consistently less than the MTCA Method A Groundwater CUL for every quarterly sampling event since August 2011 (June 2013 for MW-5).

- Samples from MW-3, MW-4, and MW-5 have never exceeded MTCA Method A CULs for DRPH or HRPH. In addition, there has only been one sample from MW-2 with a MTCA Method A CUL exceedance (HRPH at 730 µg/L in August 2012). The consistent long-term compliance with the MTCA Method A CUL for DRPH and the single isolated historical exceedance of the MTCA Method A CUL for HRPH suggests that a less frequent sampling schedule is warranted for MW-2, MW-3, MW-4, and MW-5. We therefore recommend a semiannual sampling schedule for these four wells with quarterly sampling retained at MW-1, MW-6, MW-7, and MW-8.

EPI expanded the shallow air injection system to remediate groundwater near MW-6. The air injection system at MW-6 was designed like the original air injection system near MW-1 and is operated in a similar manner. In November 2016, shallow air injections near MW-1 and MW-6 were resumed using a compressor that is able to operate under low voltage conditions to address the MTCA Method A CUL exceedances for DRPH in samples from both wells.

Analytical and field data from MW-1 demonstrate that the air injection technology used at the site creates aerobic geochemical conditions and promotes increased biodegradation of the DRPH and HRPH in groundwater. Air injection system operation near MW-6 has not been sustained for a sufficiently long period to make a valid assessment of whether the expanded system is capable of similar success at that location.

Sustained operation of the air injection system has been problematic at the site as demonstrated by several inoperable blowers caused by overheating. The likely problem is that the site, and the surrounding area, has 208-volt electrical power, which can cause 220-230 volt electrical motors to overheat due to the increased amperage required to make up for the low voltage. EPI has purchased and installed a blower that is rated for continuous operation at 208 volts, or lower, for the air injection system.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

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Principal Hydrogeologist

State of Washington
Hydrogeologist
260
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

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Attachments

Attachment A	Boring Logs
Attachment B	Well Development Forms
Attachment C	Sampling Field Notes and Forms
Attachment D	Analytical Laboratory Reports

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft.)	Top of Casing Elevation (ft.)	Groundwater Elevation	pH	Specific Cond. (mS/cm^2)	Dissolved Oxygen (mg/L)	Temp. (^{o}C)	Reduction Potential (mV)	Turbidity (NTU)
September 16, 2016										
MW-1	09/16/16	5.99	95.46	89.47	5.94	0.451	0.16	18.83	95.5	NM
MW-2	09/16/16	6.13	95.52	89.39	6.11	0.451	0.15	17.20	59.8	NM
MW-3	09/16/16	6.09	95.47	89.38	6.33	0.600	0.11	18.28	-47.8	NM
MW-4	09/29/16	6.40	95.61	89.21	6.40	0.731	0.64	16.59	29.4	NM
MW-5	09/16/16	6.11	95.58	89.47	6.25	0.550	0.10	17.48	-32.8	NM
MW-6	09/16/16	6.01	95.44	89.43	6.25	0.509	0.33	18.91	-62.3	NM
MW-7	09/16/16	5.15	94.28	89.13	6.23	0.776	0.57	18.74	-58.7	NM
MW-8	10/03/16	5.09	94.14	89.05	6.24	1.235	0.52	19.95	-26.4	NM
December 20, 2016										
MW-1	12/20/16	4.92	95.46	90.54	6.65	0.132	7.69	12.85	-7.4	NM
MW-2	12/20/16	4.71	95.52	90.81	5.79	0.264	0.87	12.02	12.6	NM
MW-3	12/20/16	5.38	95.47	90.09	6.37	0.590	1.94	14.36	-41	NM
MW-4	12/20/16	6.32	95.61	89.29	6.33	0.602	0.75	13.84	-23.6	NM
MW-5	12/20/16	5.16	95.58	90.42	6.28	0.530	1.09	14.00	-18.8	NM
MW-6	12/20/16	5.14	95.44	90.30	6.36	0.531	1.30	15.44	-46.1	NM
MW-7	12/20/16	5.27	94.28	89.01	6.32	0.69	0.72	13.95	-39.5	NM
MW-8	12/20/16	4.62	94.14	89.52	6.40	1.15	1.29	14.19	-40.5	NM

Notes:

NM = Not Measured

Table 2
Boring and Well Installation Analytical Results
September 2016 Groundwater Sampling Report -- Twentieth Round
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Soil Sample ID	Sample Depth (feet bgs)	Sample Date	DRPH[a] (mg/kg)	HRPH[a] (mg/kg)
MW-7-S-5.5	5.5	8/26/16	<50	<250
MW-8-S-5.5	5.5	8/26/16	<50	<250
BH-1-S-5	5	8/26/16	<50	<250
BH-1-S-10	10	8/26/16	<50	<250
BH-1-S-15	15	8/26/16	<50	<250
BH-2-S-5	5	8/26/16	<50	<250
BH-2-S-10	10	8/26/16	<50	<250
BH-2-S-15	15	8/26/16	<50	<250
MTCA Method A Soil Cleanup Level (mg/kg)			**2000**	**2000**

Groundwater Sample ID	Screened Interval (feet bgs)	Sample Date	DRPH[a] (µg/L)	HRPH[a] (µg/L)
BH-1-W-6.5	5-15	8/26/16	**490**	<250
BH-2-W-6.8	5-15	8/26/16	**1,000**	<250
MTCA Method A Groundwater Cleanup Level (µg/L)			**500**	**500**

Notes:

Bold Bold results indicate that the compound was detected.

Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.

a Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx

Table 3: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

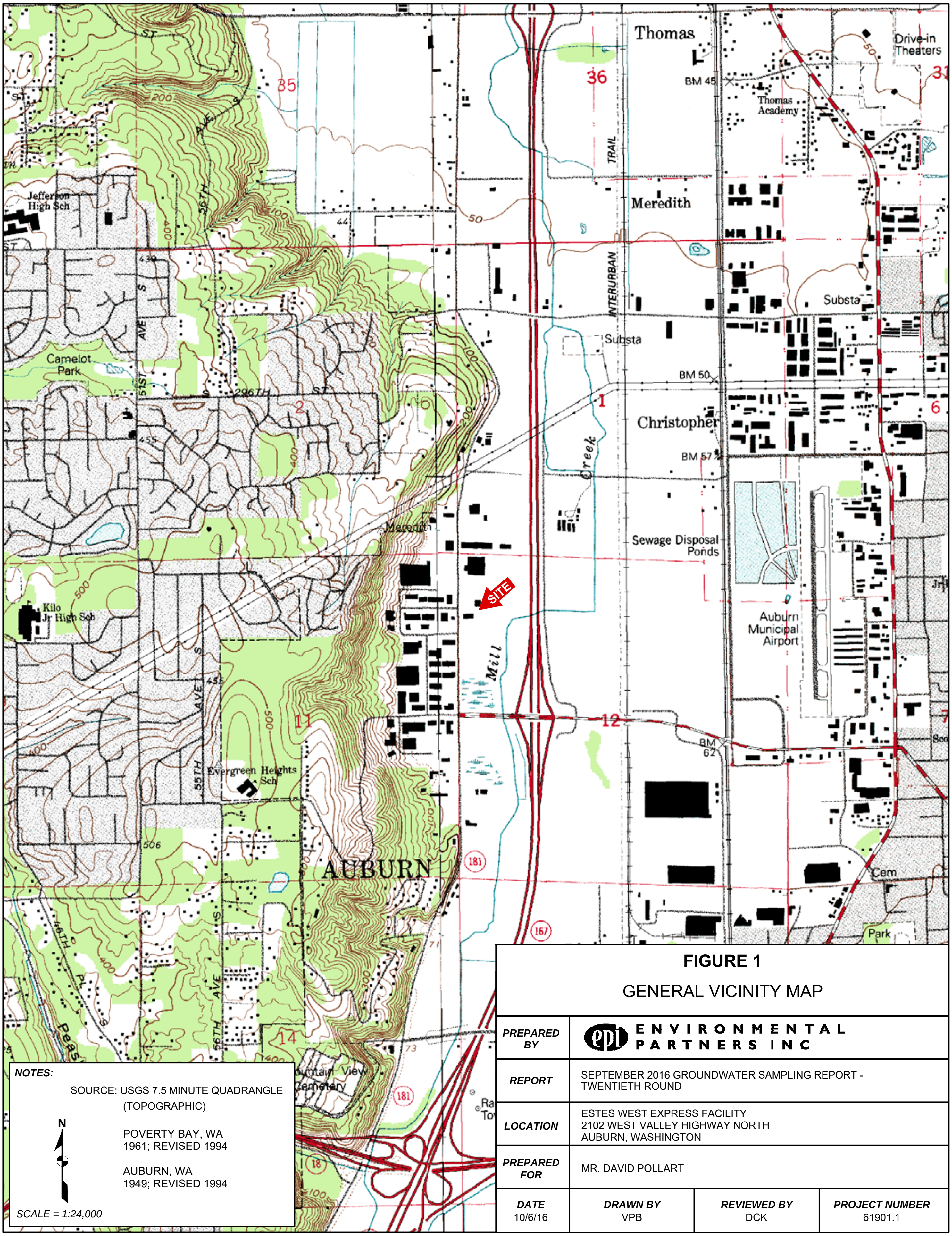
Well ID	Date Sampled	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	<100	**690**	<250	<1	<1	<1	<3
	5/17/12	<100	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	<100	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	<100	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	<100	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	<100	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	<100	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	NA	**1,400**	**400**	NA			
	2/20/14	NA	**700**	**280**	NA			
	5/15/14	NA	**940**	<250	NA			
	8/14/14	NA	<50	<250	NA			
	11/24/14	NA	**220**	<250	NA			
	3/31/15	NA	**340**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**700**	**290**	NA			
	3/3/16	NA	**220**	<250	NA			
	6/21/16	NA	**160**	<250	NA			
	9/16/16	NA	**580**	**420**	NA			
	12/20/16	NA	**190**	<250	NA			
MW-2	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**500**	<250	<1	<1	<1	<3
	2/10/12	<100	<50	<250	<1	<1	<1	<3
	5/17/12	<100	<50	<250	<1	<1	<1	<3
	8/28/12	<100	**470**	**730**	<1	<1	<1	<3
	11/15/12	<100	**140**	<260	<1	<1	<1	<3
	2/14/13	<100	**94**	**260**	<1	<1	<1	<3
	5/16/13	<100	**77**	<250	<1	<1	<1	<3
	8/14/13	<100	**280**	<250	<1	<1	<1	<3
	11/25/13	NA	**53**	<250	NA			
	2/20/14	NA	<50	<250	NA			
	5/15/14	NA	<50	<250	NA			
	8/14/14	NA	**100**	<250	NA			
	11/24/14	NA	<50	<250	NA			
	3/31/15	NA	**57**	<250	NA			
	6/29/15	NA	**97**	<250	NA			
	9/28/15	NA	**150**	<250	NA			
	3/3/16	NA	<50	<250	NA			
	6/21/16	NA	**86**	<250	NA			
	9/16/16	NA	**95**	<250	NA			
	12/20/16	NA	<50	<250	NA			
MW-3	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**65**	<250	<1	<1	<1	<3
	2/10/12	<100	**100**	<250	<1	<1	<1	<3
	5/17/12	<100	**53**	<250	<1	<1	<1	<3
	8/28/12	<100	**130**	<250	<1	<1	<1	<3
	11/15/12	<100	**120**	<280	<1	<1	<1	<3
	2/14/13	<100	**150**	<250	<1	<1	<1	<3
	5/16/13	<100	**200**	<250	<1	<1	<1	<3
	8/14/13	<100	**140**	<250	<1	<1	<1	<3
	11/25/13	NA	**170**	<250	NA			
	2/20/14	NA	**160**	<250	NA			
	5/15/14	NA	**120**	<250	NA			
	8/14/14	NA	**140**	<250	NA			
	11/24/14	NA	**130**	<250	NA			
	3/31/15	NA	**220**	<250	NA			
	6/29/15	NA	**130**	<250	NA			
	9/28/15	NA	**110**	<250	NA			
	3/3/16	NA	**92**	<250	NA			
	6/21/16	NA	**85**	<250	NA			
	9/16/16	NA	**100**	<250	NA			
	12/20/16	NA	**99**	<250	NA			

Table 3: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	GRPH[a]	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4	8/12/11	<100	<250	<500	<1	<1	<1	<3
	11/11/11	<100	**72**	<250	<1	<1	<1	<3
	2/10/12	<100	**150**	<250	<1	<1	<1	<3
	5/17/12	<100	**160**	<250	<1	<1	<1	<3
	8/28/12	<100	**200**	<250	<1	<1	<1	<3
	11/15/12	<100	**220**	<250	<1	<1	<1	<3
	2/14/13	<100	**220**	<250	<1	<1	<1	<3
	5/16/13	<100	**210**	<250	<1	<1	<1	<3
	8/14/13	<100	**200**	<250	<1	<1	<1	<3
	2/20/14	NA	**140**	<250	NA			
	5/15/14	NA	**140**	<250	NA			
	8/14/14	NA	**290**	<250	NA			
	11/24/14	NA	**290**	<250	NA			
	3/31/15	NA	**320**	<250	NA			
	6/29/15	NA	**240**	<250	NA			
	9/28/15	NA	**220**	<250	NA			
	3/3/16	NA	**130**	<250	NA			
	6/21/16	NA	**63**	<250	NA			
	9/16/16	NA	*750*[e]	*1700*[e]	NA			
	9/29/16	NA	**68**	<250	NA			
	12/20/16	NA	**78**	<250	NA			
MW-5	6/5/13	<100	**160**	<250	<1	<1	<1	<3
	8/14/13	<100	**56**	<250	<1	<1	<1	<3
	11/24/14	<100	<50	<250	NA			
	3/31/15	NA	**52**	<250	NA			
	6/29/15	NA	<50	<250	NA			
	9/28/15	NA	<50	<250	NA			
	3/3/16	NA	<50	<250	NA			
	6/21/16	NA	<50	<250	NA			
	9/16/16	NA	<50	<250	NA			
	12/20/16	NA	<50	<250	NA			
MW-6	6/5/13	<100	**680**	<250	<1	<1	<1	<3
	8/14/13	<100	**790**	<250	<1	<1	<1	<3
	2/20/14	NA	**740**	<250	NA			
	5/15/14	NA	**950**	<250	NA			
	8/14/14	NA	**1,200**	<250	NA			
	11/24/14	NA	**680**	<250	NA			
	3/31/15	NA	**750**	<250	NA			
	6/29/15	NA	**750**	<250	NA			
	9/28/15	NA	**610**	<250	NA			
	3/3/16	NA	**1,100**	**390**	NA			
	6/21/16	NA	**650**	<250	NA			
	9/16/16	NA	**340**	<250	NA			
	12/20/16	NA	**640**	<250	NA			
MW-7	9/16/16	NA	**140**	<250	NA			
	12/20/16	NA	**78**	<250	NA			
MW-8	9/16/16	NA	*1100*[e]	*590*[e]	NA			
	10/3/16	NA	**290**	<250	NA			
	12/20/16	NA	**140**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**800/1,000[d]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

[a] Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
[b] Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
[c] Analyzed using EPA Method 8021B
[d] Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
[e] Anomalous data, well re-development and re-sampling confirm these data are anomalous.
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
= Concentration is greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

N

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

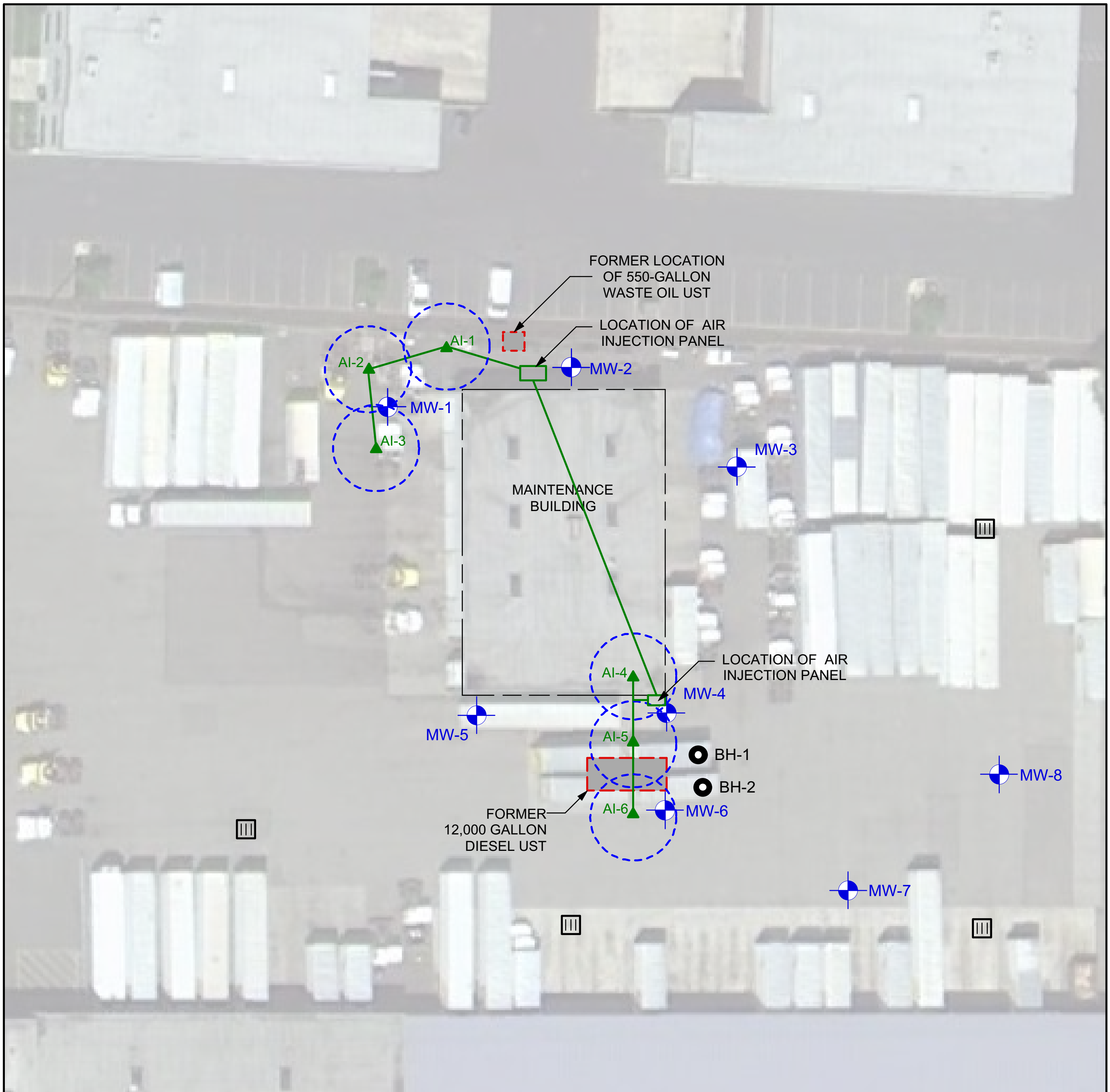
SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTIETH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/6/16	VPB	DCK	61901.1



NOTES:

- EXISTING MONITORING WELL LOCATION
- AIR INJECTION WELL LOCATION
- HOLLOW STEM AUGER BORING
- CATCH BASIN
- APPROXIMATE LOCATION OF AIR INJECTION PIPING
- APPROXIMATE RADIUS OF INFLUENCE (ROI)
- FORMER UNDERGROUND STORAGE TANK

N

0 5 10 20

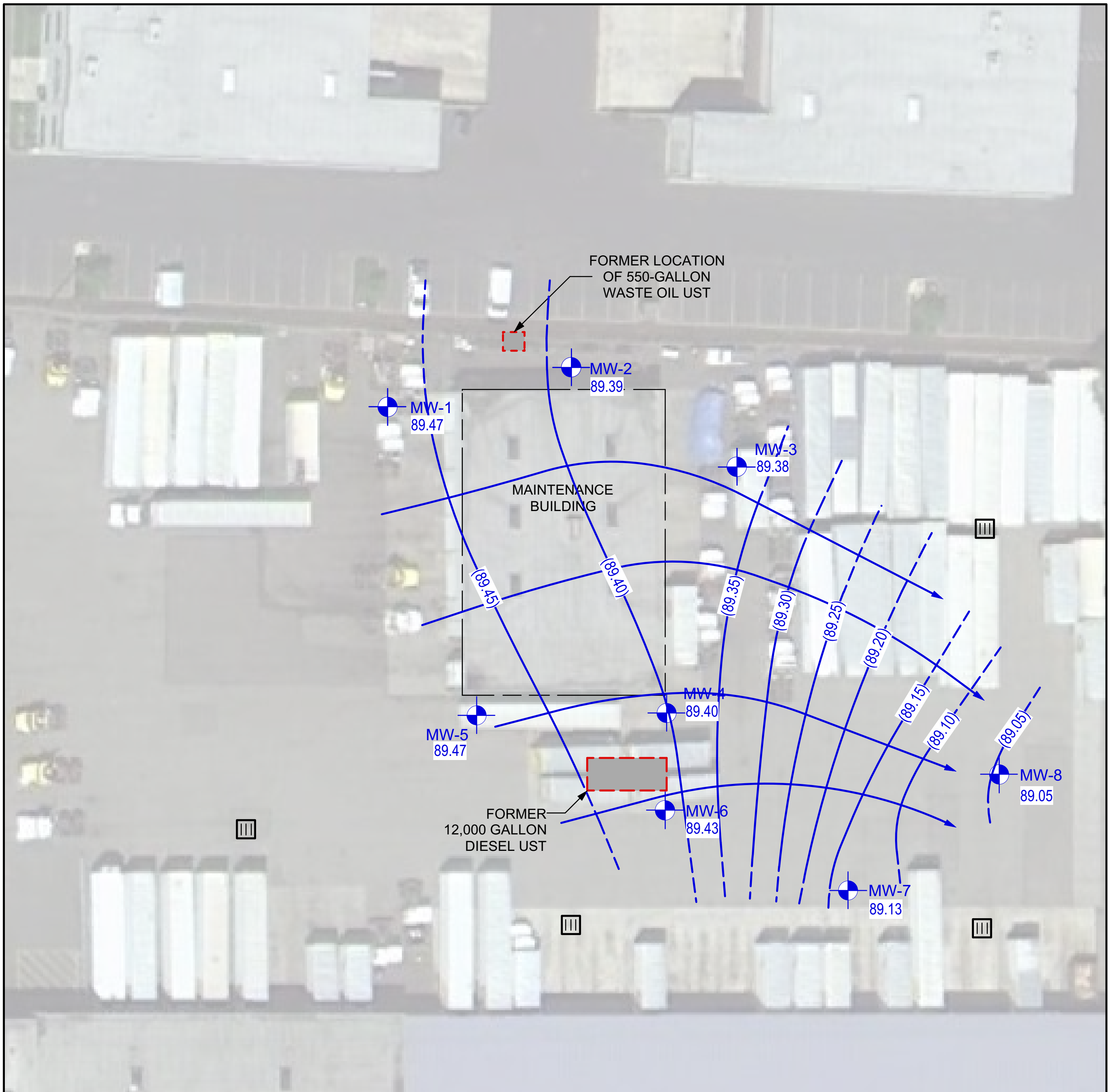
SCALE: 1" = 20'

FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTIETH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/6/16	VPB	DCK	61901.1



NOTES:

- MW-1 89.47 — MONITORING WELL LOCATION AND SEPTEMBER 16, 2016 WATER LEVEL ELEVATION IN FEET
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- (89.45) — GROUNDWATER ELEVATION CONTOUR IN FEET
- FORMER UNDERGROUND STORAGE TANK
- CATCH BASIN

N

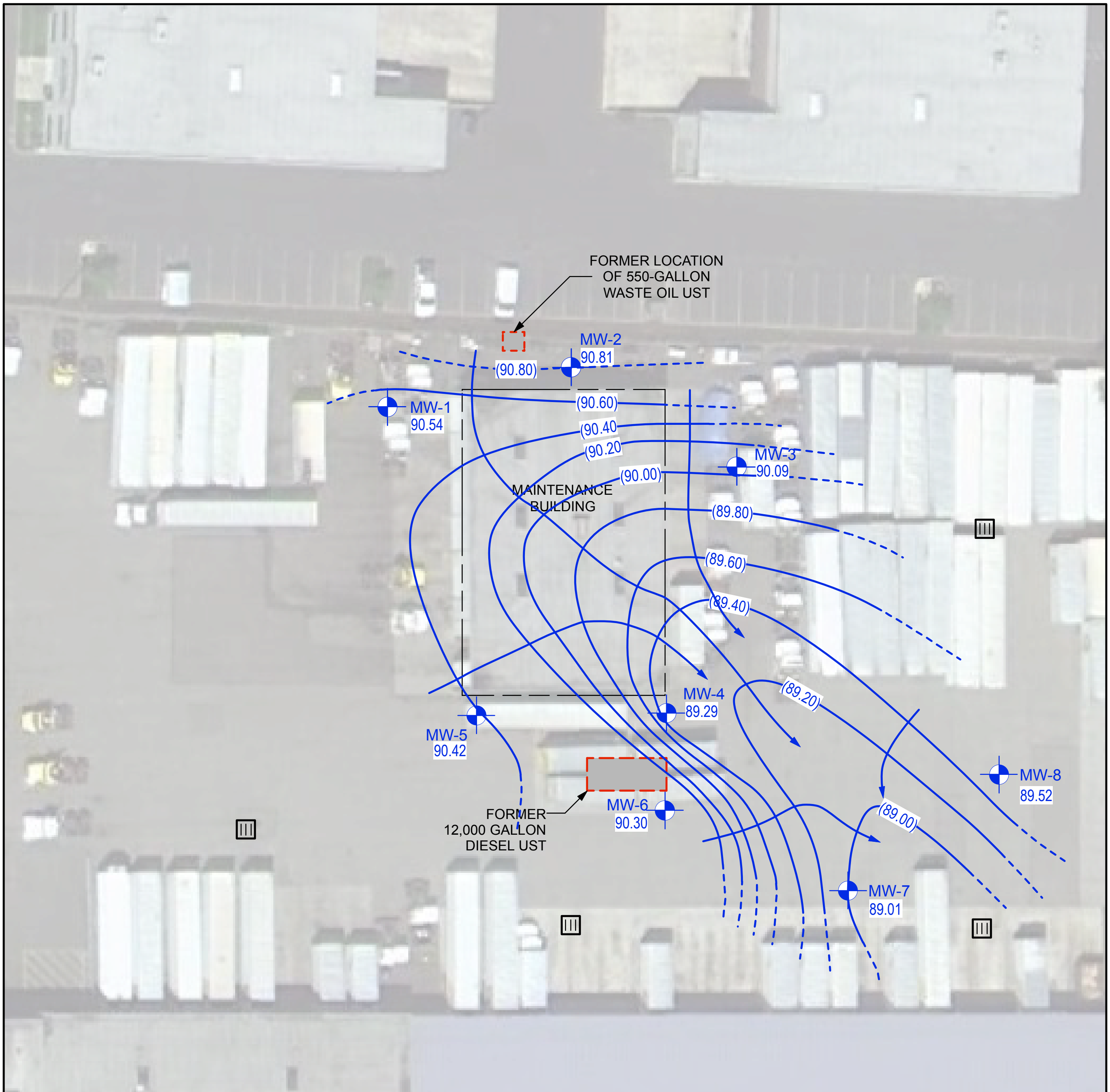
0 5 10 20

SCALE: 1" = 20'

FIGURE 3
SEPTEMBER 16, 2016 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTIETH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/6/16	VPB	DCK	61901.1



NOTES:

MW-1 89.47	MONITORING WELL LOCATION AND SEPTEMBER 16, 2016 WATER LEVEL ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION
(89.45)	GROUNDWATER ELEVATION CONTOUR IN FEET
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

FIGURE 4

DECEMBER 20, 2016 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	DECEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTY-FIRST ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 1/11/17	***DRAWN BY*** AM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Boring Logs

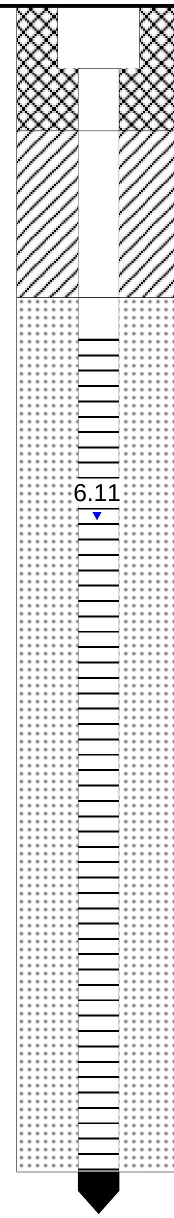
ENVIRONMENTAL PARTNERS INC

BORING ID: MW-7

SITE ADDRESS: **2012 West Valley Highway North**	CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**	SCREEN INTERVAL: **4 - 14 ft BGS**
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod** / BOREHOLE SIZE: **2 inch**	TOTAL DEPTH: **14 ft**	FILTER PACK INTERVAL: **3.5 - 14 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Asphalt and Gravel Sub-Base				
1	ML	SANDY SILT WITH GRAVEL; gray-brown; damp; hard; mostly silt with some sand and gravel; no odor				
3.5			60	8,17,19		0.4
5		Moist				
5.5	ML	SILT WITH SAND; dark gray; wet; stiff, becoming medium stiff at 8.5 ft. bgs; mostly silt with some sand; no odor	40	8,10,4	MW-7-S-5.5	0.2
9			100	1,5,4		0.1
11.5	SW	POORLY-GRADED SAND WITH SILT; gray; wet; medium stiff; mostly sand with some silt				
13			100	4,3,4		
14		End of Borehole				

Well Construction



NOTES: Ecology Well Tag ID: BJX 397

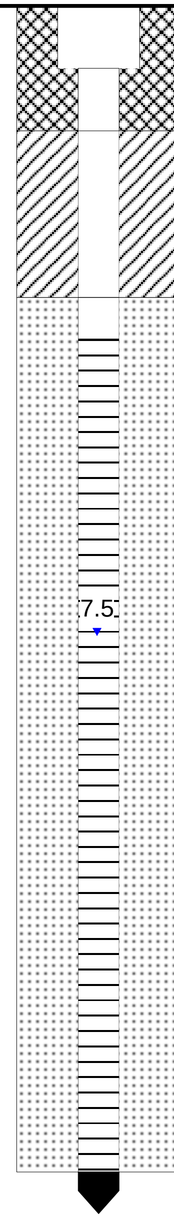
ENVIRONMENTAL PARTNERS INC

BORING ID: MW-8

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**	SCREEN INTERVAL: **4 - 14 ft BGS**
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod** / BOREHOLE SIZE: **2 inch**	TOTAL DEPTH: **14 ft**	FILTER PACK INTERVAL: **3.5 - 14 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Asphalt and Gravel Sub-Base				
1.5	ML	SANDY SILT WITH GRAVEL; gray; damp-moist; hard; mostly silt with some sand; no odor				
3–4.5			40	11,18,19		0.4
5.5		Increasing gravel content; wet			MW-8-S-5.5	0.3
5.5–6.5			30	10,6,1		
6.5	ML	SILT WITH SAND; gray; moist-wet; soft; mostly silt with some sand; no odor				
8.5–10			80	3,1,2		0.3
11.5		Increasing sand content; color change to dark brown/black; becomming stiffer with depth				
12.5–14			90	3,5,5		
14		End of Borehole				

Well Construction



NOTES: Ecology Well Tag ID: BJX 396

ENVIRONMENTAL PARTNERS INC

BORING ID: BH-1

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**

DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	DECOMMISSIONING MATERIAL: **Bentonite**
LOGGED BY: **J. Sherrod**	TOTAL DEPTH: **15 ft**	BOREHOLE SIZE: **9 inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Comments
0		Asphalt and Gravel Sub-Base					
1	ML	SANDY SILT WITH GRAVEL; gray; damp-moist; very stiff; mostly silt with some sand and gravel; no odor					
5					BH-1-S-5	1	
5.5			100	8,23,14			
6	SW	POORLY-GRADED SAND WITH SILT; dark gray; wet; stiff; mostly sand with some silt; no odor					
6.5					Recon Water Sample BH-1-W-6.5	6.5	
7.5							Temporary PVC well screen installed for water sample
10					BH-1-S-10	0.2	
10.5			100	4,11,12			
14.5			100	7,8,12			
15		End of Borehole			BH-1-S-15	0.7	
16							

NOTES: Backfilled with bentonite and patched with asphalt

ENVIRONMENTAL PARTNERS INC

BORING ID: BH-2

SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**	
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	
DRILLING EQUIPMENT: **Mobile Drill B-59**	DATE: **8/26/16**	
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	DECOMMISSIONING MATERIAL: **Bentonite**
LOGGED BY: **J. Sherrod**	TOTAL DEPTH: **15 ft**	BOREHOLE SIZE: **9 inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Comments
0		Asphalt and Gravel Sub-Base					
1	ML	SANDY SILT WITH GRAVEL; gray; damp; very stiff; mostly silt with some sand and gravel; no odor					
5			50	8,16,10	BH-2-S-5	0.7	
6.8					Recon Water Sample BH-2-W-6.8		Temporary PVC well screen installed for water sample
10	SW	POORLY-GRADED SAND WITH SILT; dark gray; wet; very stiff; mostly sand with few silt; no odor		11,15,16	BH-2-S-10	0.4	
14–15				7,12,13	BH-2-S-15	0.2	
15		End of Borehole					

NOTES: Backfilled with bentonite and patched with asphalt

Attachment B
Well Development Forms

Field Measurements Record

Job Name/Location: Estes West

Job Number: 61901

Date: 8/26/16

Well #: MW-7

Page Number: 1 of 1

Time	Depth to Water (ft.)	Depth of Well (ft.)	Volume Purged (gal.)	pH	Cond.	Turbidity (NTU)	Temp. (oC)	Visual Observations
1315	6.11	14'	10 gallons	7.72	0.542	19.21	21.12	purge 10 gallons
1325								surge well
1335	"	"	15 gallons					purge 5 gallons
1350	6.08	14'	25 gallons	7.56	0.544	2.11	21.19	water clear, well developed

Field Measurements Record

Job Name/Location: 61901

Job Number: Estes West

Date: 8/26/16

Well #: MW-8

Page Number: 1 of 1

Time	Depth to Water (ft.)	Depth of Well (ft.)	Volume Purged (gal.)	pH	Cond.	Turbidity (NTU)	Temp. (oC)	Visual Observations
1116	7.5'	14'	5 gallons	6.78	1.161	21.7	21.46	
1124	—	—	10 gallons	—	—	—	—	Well being surged
1130	—	—	13 gallons	—	—	—	—	Purging water, clearing up
1135			15 gallons					Stop purging, letting well sit
1155	6.5'	14'	20 gallons	6.77	0.726	2.4	22.91	Water is pumping clean

Attachment C
Sampling Field Notes and Forms

Overcast : 60°F

6/2/16 Scope: groundwater monitoring

1200 J. Sherrod on-site, compressor
☆ not working, appears to have
mechanicaly failed.

Well ID	DTW
MW-2	5.95'
MW-1	5.82'
MW-5	5.96'
MW-6	5.91'
MW-4	6.11'
MW-3	5.93'

1245 Calibrate YSI

1410 After speaking with on-site personel, the pump was last seen working friday 5/27/16. The pump was not working 5/31/16. Compressor shows ~~compress~~ breaker with shop compressor.

1500 New drum used, existing drum was full, 6 gallons of water was purged this event.

1520 J. Sherrod off-site

Sunny. 60°F

9/16/16 Scope: Survey + well sampling

0645 J. Sherrod + LWB on-site, open all well heads.

0715 Begin well survey

0830 Complete well survey, collect DTW.

Well	DTW
MW-8	5.09'
MW-7	5.15'
MW-6	6.01'
MW-4	6.21'
MW-3	6.09'
MW-5	6.11'
MW-1	5.99'
MW-2	6.13'

0850 Calibrate YSI's

0930 J. Sherrod + LWB Begin sampling, see stabilization sheets for well specific notes.

1300 J. Sherrod + LWB off-site

EPI Groundwater Sampling Field Data

Project Name:
Project Number: 61901

Well ID:	~~M~~ MW-2	Date	9/16/16
Sample ID:	MW-2	Field Team: (Initials)	EWB, JS
Field Conditions	Cool, cloudy, calm		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
~~Peristaltic Pump~~
Other: : ____________

Start Time	928
End Time	1001
Total Gallons Purged	1.7

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
931	0.1	6.14	0.483	0.70	15.99	49.5		Strong odor petrol
934	0.2	6.13	0.477	0.51	16.19	48.4		
937	0.4	6.11	0.463	0.37	16.46	45.5		
940	0.6	6.10	0.450	0.37	16.57	60.5		
943	0.7	6.09	0.437	0.28	16.75	72.4		
946	0.9	6.09	0.430	0.25	16.95	71.8		
949	1.0	6.09	0.431	0.18	17.08	72.4		
952	1.2	6.09	0.438	0.17	17.15	68.5		
955	1.3	6.10	0.444	0.16	17.19	65.3		
958	1.5	6.10	0.445	0.17	17.24	60.1		
1001	1.7	6.11	0.451	0.15	17.20	59.8		

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
ORO	1002			

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: ~~[illegible]~~ 61901

Well ID:	MW-6	Date	9/16/16
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions	Cloudy - 60°F		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	0942
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0944	0.1	6.37	0.530	1.95	18.60	147.0	—	clear
0947	0.3	6.28	0.530	0.80	18.66	11.0	—	clear
0950	0.5	6.27	0.528	0.67	18.75	5.4	—	clear
0953	0.7	6.26	0.523	0.57	18.87	-24.4	—	clear
0956	0.9	6.26	0.517	0.53	18.83	-40.0	—	clear
0959	1.1	6.25	0.514	0.44	18.89	-48.1	—	clear
1002	1.3	6.25	0.513	0.45	18.89	-54.3	—	clear
1005	1.5	6.25	0.510	0.40	18.90	-59.3	—	clear
1008	1.7	6.25	0.509	0.33	18.91	-62.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
ORO + DRO	1009	½ L Amber	NA	
Naphthalenes	1009	3 voa	HCL	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-7	Date	9/16/16
Sample ID:	MW-7	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	1017
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1023	0.1	6.22	0.773	3.02	18.37	-32.6	—	clear
1026	0.3	6.19	0.782	0.79	18.40	-39.9	—	clear
1029	0.5	6.18	0.784	0.83	18.44	-44.3	—	clear
1032	0.7	6.19	0.783	0.79	18.52	-50.8	—	clear
1035	0.9	6.20	0.781	0.88	18.59	-55.6	—	clear
1038	1.1	6.21	0.780	0.72	18.66	-58.1	—	clear
1041	1.3	6.22	0.777	0.57	18.75	-59.6	—	clear
1044	1.5	6.23	0.776	0.57	18.74	-59.7	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1045	1/2 L Ltr Amb	N/A	
Naphthalene	1045	3x VOA	HCL	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:
Project Number: 61901

Well ID:	MW-1	Date	9/16/16
Sample ID:	MW-1	Field Team: (Initials)	EWB, JS
Field Conditions	Cool, cloudy, calm		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	1015
End Time	1055
Total Gallons Purged	1.7

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1018	0.1	6.25	0.677	1.40	17.91	5.0		clear, strong petrol odor
1021	0.2	6.11	0.539	0.30	18.08	17.3		
1024	0.4	6.08	0.493	0.28	18.22	29.9		
1027	0.5	6.03	0.475	0.28	18.36	48.0		
1030	0.6	6.02	0.457	0.25	18.44	55.4		
1033	0.7	6.01	0.445	0.22	18.57	57.4		
1036	0.9	6.00	0.436	0.19	18.60	69.7		
1039	1.1	5.99	0.432	0.24	18.65	73.3		
1042	1.2	5.97	0.424	0.21	18.82	74.2		
1045	1.4	5.96	0.429	0.26	18.84	79.7		
1048	1.5	5.95	0.435	0.19	18.84	90.3		
1051	1.6	5.94	0.442	0.17	18.85	92.9		
1054	1.7	5.94	0.451	0.16	18.83	95.5		

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
	1056			

End Time:

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-8	Date	9/16/16
Sample ID:	MW-8	Field Team: (Initials)	JJ
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ______

Start Time	1056
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1102	0.1	6.32	1.262	2.32	20.26	-46.6	—	Clear
1105	0.3	6.28	1.262	1.89	20.33	-57.3	—	Clear
1108	0.5	6.27	1.261	1.81	20.45	-64.0	—	Clear
1111	0.7	6.28	1.260	1.99	20.62	-70.1	—	Clear
1114	0.9	6.28	1.259	2.22	20.78	-74.1	—	Clear
1117	1.1	6.28	1.254	1.90	20.94	-77.8	—	Clear
1120	1.3	6.29	1.248	1.82	20.93	-79.6	—	Clear
1123	1.5	6.29	1.243		21.02	-82.3	—	Clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO+ORO	1124	1/2 L Amb	N/A	
Naphthalene	1124	3 X Voa	HCL	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:			
Project Number:	61901		
Well ID:	MW-5	Date	9/16/16
Sample ID:	MW-5	Field Team: (Initials)	EWB, JS
Field Conditions	Cool, pt cloudy, calm		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume (2"=0.163 x depth) (4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ____________

Start Time	1113
End Time	1152
Total Gallons Purged	1.9

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1117	0.1	6.25	0.616	1.31	17.61	-23.9		clear, petrol
1120	0.2	6.24	0.615	0.39	17.55	-27.0		odor
1123	0.3	6.24	0.615	0.37	17.57	-28.1		
1126	0.4	6.25	0.614	0.28	17.61	-26.3		
1129	0.6	6.25	0.614	0.25	17.60	-26.4		
1131	0.7	6.25	0.609	0.26	17.59	-29.1		
1134	0.9	6.25	0.599	0.25	17.59	-30.0		
1137	1.0	6.25	0.590	0.20	17.56	-27.8		
1140	1.1	6.25	0.575	0.15	17.53	-30.0		
1143	1.3	6.25	0.570	0.13	17.47	-31.6		
1146	1.5	6.25	0.562	0.14	17.50	-30.2		
1149	1.7	6.25	0.558	0.14	17.51	-30.6		
1152	1.9	6.25	0.550	0.10	17.48	-32.8		

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
	1153			

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	Mw-4	Date	9/16/16
Sample ID:	Mw-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other:

Start Time	1147
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1150	0.1	7.09	0.956	5.60	17.72	-30.5	—	clear
1153	0.4	6.57	0.920	2.32	17.52	-27.0	—	clear
1156	0.6	6.36	0.887	1.73	17.46	-32.2	—	clear
1159	0.8	6.28	0.872	1.69	17.40	-37.8	—	clear
1202	1.0	6.23	0.857	1.54	17.26	-43.1	—	clear
1205	1.2	6.21	0.848	1.54	17.27	-45.1	—	clear
1208	1.4	6.18	0.828	1.58	17.28	-50.1	—	clear
1211	1.6	6.18	0.820	1.68	17.29	-52.4	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1212	1/2 Ltr Amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name:
Project Number: 61901

Well ID:	MW-3	Date	9/16/16
Sample ID:	MW-3	Field Team: (Initials)	EWB JS
Field Conditions	Warm, clear, calm		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	1210
End Time	1240
Total Gallons Purged	1.6

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1213	0.1	6.31	0.826	1.09	17.88	-39.4		Clear, slight
1216	0.3	6.32	0.807	0.30	17.90	-41.3		odor
1219	0.4	6.33	0.775	0.29	18.00	-43.4		
1222	0.5	6.33	0.723	0.19	18.07	-45.7		
1225	0.7	6.33	0.691	0.14	18.11	-45.8		
1228	0.9	6.34	0.645	0.12	18.22	-47.1		
1231	1.1	6.33	0.636	0.12	18.21	-48.8		
1234	1.3	6.33	0.618	0.13	18.23	-49.2		
1237	1.4	6.33	0.610	0.14	18.23	-48.6		
1240	1.6	6.33	0.600	0.11	18.28	-47.8		
1243								

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
	1241	amber		

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

61901, 12-20-16

0630 J Sherrod on-site

0640 open all well heads and prepare to take DTW, System on while DTW / sampling performed.

well	DTW
MW-7	5.27'
MW-8	4.62'
MW-6	5.14'
MW-4	6.32'
MW-3	5.38'
MW-5	5.16'
MW-1	4.92'
MW-2	4.71'

0715 Calibrate YSI

0740 Begin Groundwater sampling, see stabilization sheets for well specific notes

1300 Finish Groundwater sampling, take parameters from AS, system

At Blower

1: 9 PSI, 0 SCFM
10 PSI, .75 SCFM
2: 9 PSI, 3.5 SCFM
8.5 PSI, 1.75 SCFM
3: 10 PSI, 7.5 SCFM
10 PSI, 1.75 SCFM
4: 11 PSI, 0 SCFM (not working?)
12 PSI, 1 SCFM
5: 18.5 PSI, 0 SCFM (not working?)
19 PSI, 1 SCFM
6: 15.5 PSI, 0 SCFM (not working?)
16.5 PSI, 0 SCFM

EPI Groundwater Sampling Field Data

Project Name: Estes West, Auburn, WA
Project Number: 01901

Well ID:	MW-8	Date	12-20-16
Sample ID:	MW-8	Field Team: (Initials)	JS
Field Conditions	windy ~48°F		

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ______

Start Time	0749
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0751	0.1	6.90	1.147	6.91	13.29	26.8	—	clear/brown
0754	0.3	6.70	1.146	4.53	13.83	11.5	—	clearing
0757	0.5	6.55	1.147	2.64	14.07	-14.5	—	clear
0800	0.7	6.48	1.148	1.93	14.13	-28.9	—	clear
0803	0.9	6.45	1.148	1.60	14.19	-35.7	—	clear
0806	1.2	6.42	1.148	1.36	14.26	-42.3	—	clear
0809	1.4	6.41	1.148	1.32	14.24	-46.3	—	clear
0812	1.6	6.40	1.150	1.29	14.19	-49.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0813	1/2L Amb	none	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-7	Date	12-20-16
Sample ID:	MW-7	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0823
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0825	0.1	6.66	0.734	5.85	13.14	-51.1	—	clearing
0828	0.3	6.47	0.723	1.16	13.65	-48.5	—	clear
0831	0.5	6.41	0.703	0.91	13.87	-42.5	—	clear
0834	0.7	6.36	0.697	0.84	13.94	-40.2	—	clear
0837	0.9	6.32	0.692	0.80	13.94	-39.4	—	clear
0840	1.2	6.32	0.690	0.72	13.95	-39.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0841	1/2 L Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-6	Date	12-20-16
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	0853
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm^2	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0854	0.1	6.56	0.536	6.71	14.18	-39.8	—	clear
0857	0.3	6.50	0.536	6.15	14.71	-40.6	—	clear
~~09~~ 0900	0.5	6.44	0.534	2.65	15.07	-40.9	—	clear
0903	0.7	6.42	0.533	2.18	15.18	-40.6	—	clear
0906	0.9	6.39	0.531	1.64	15.33	-41.0	—	clear
0909	1.1	6.39	0.531	1.36	15.39	-42.7	—	clear
0912	1.3	6.38	0.532	1.21	15.34	-45.0	—	clear
0915	1.5	6.36	0.531	1.30	15.44	-46.1	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0916	½ Ltr Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Slight skim in bucket.

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61401

Well ID:	MW-3	Date	12-20-16
Sample ID:	MW-3	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0930
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0931	0.1	6.47	0.628	5.30	13.91	-46.8	—	clear
0934	0.3	6.42	0.627	2.98	14.17	-47.4	—	clear
0937	0.5	6.46	0.621	2.55	14.29	-46.8	—	clear
0940	0.7	6.41	0.610	2.14	14.32	-44.2	—	clear
0943	0.9	6.39	0.599	2.07	14.37	-43.0	—	clear
0946	1.1	6.37	0.590	1.94	14.36	-41.0	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0947	½ L Amb	none	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 6 1901

Well ID:	MW-4	Date	12-20-16
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: :

Start Time	1025
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1027	0.1	6.59	0.576	4.77	13.24	-31.8	—	clear
1030	0.3	6.53	0.582	1.20	13.75	-30.7	—	clear
1033	0.5	6.45	0.586	0.85	13.87	-28.1	—	clear
1036	0.7	6.55	0.592	0.97	13.45	-33.2	—	clear
1039	0.9	6.46	0.594	0.92	13.88	-29.3	—	clear
1042	1.1	6.46	0.595	1.16	13.87	-26.1	—	clear
1045	1.3	6.37	0.599	0.81	13.77	-24.8	—	clear
1048	1.5	6.34	0.600	0.79	13.8[illegible]	-24.1	—	clear
1051	1.7	6.33	0.602	0.75	13.84	-23.6	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO+ORO	1052	1/2 Ltr Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-5	Date	12-20-16
Sample ID:	MW-5	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	1101
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1103	0.1	6.43	0.522	4.42	13.84	-19.6	—	clear
1106	0.3	6.34	0.523	4.98	13.95	-23.1	—	clear
1109	0.5	6.34	0.526	1.24	13.99	-22.2	—	clear
1112	0.7	6.32	0.528	1.28	13.96	~~19~~ 19.9	—	clear
1115	0.9	6.28	0.530	1.09	14.00	-18.8	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1116	1/2 Ltr Amb.	none	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-2	Date	12-20-16
Sample ID:	MW-2	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
~~Peristaltic Pump~~
~~Other:~~

Start Time	1127
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1129	0.1	6.49	0.252	5.93	12.15	-6.5	—	clearing
1132	0.3	6.16	0.254	1.81	12.25	4.2	—	clearing
1135	0.5	5.98	0.251	1.05	12.27	6.6	—	clear
1138	0.7	6.01	0.251	1.00	12.15	3.9	—	clear
1141	0.9	5.85	0.252	0.92	12.08	11.1	—	clear
1144	1.1	5.79	0.252	0.84	12.06	12.8	—	clear
1147	1.3	5.80	0.255	0.86	12.04	12.5	—	clear
1150	1.5	5.79	0.264	0.87	12.02	12.6	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1151	1/2 Ltr Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61401

Well ID:	MW-1	Date	12-20-16
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	1159
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1200	0.1	6.57	0.135	8.37	12.84	-14.5	—	clear
1203	0.3	6.53	0.134	8.34	12.72	-8.6	—	clear
1206	0.5	6.57	0.131	7.87	13.22	-10.8	—	clear
1209	0.7	6.65	0.134	7.90	12.88	-16.0	—	clear
1212	0.9	6.68	0.132	7.79	12.93	-16.5	—	clear
1215	1.1	6.67	0.132	7.72	12.81	-14.1	—	clear
1218	1.3	6.65	0.132	7.69	12.85	-7.4	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1219	1/2 Ltr Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment D
Analytical Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 7, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 608534

Dear Mr Kunkel:

Included are the results from the testing of material submitted on August 29, 2016 from the 61901, F&BI 608534 project. There are 6 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
c: Cynthia Moon
EPI0907R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 29, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 608534 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
608534-01	MW-8-S-5.5
608534-02	MW-7-S-5.5
608534-03	BH-1-S-5
608534-04	BH-1-S-10
608534-05	BH-1-S-15
608534-06	BH-1-W-6.5
608534-07	BH-2-S-5
608534-08	BH-2-S-10
608534-09	BH-2-S-15
608534-10	BH-2-W-6.8

All quality control requirements were acceptable.

Date of Report: 09/07/16
Date Received: 08/29/16
Project: 61901, F&BI 608534
Date Extracted: 08/31/16
Date Analyzed: 08/31/16

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)
MW-8-S-5.5 608534-01	<50	<250	100
MW-7-S-5.5 608534-02	<50	<250	101
BH-1-S-5 608534-03	<50	<250	97
BH-1-S-10 608534-04	<50	<250	97
BH-1-S-15 608534-05	<50	<250	98
BH-2-S-5 608534-07	<50	<250	96
BH-2-S-10 608534-08	<50	<250	100
BH-2-S-15 608534-09	<50	<250	98
Method Blank 06-1794 MB	<50	<250	102

Date of Report: 09/07/16
Date Received: 08/29/16
Project: 61901, F&BI 608534
Date Extracted: 08/31/16
Date Analyzed: 08/31/16

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 41-152)
BH-1-W-6.5 608534-06	490 x	<250	70
BH-2-W-6.8 608534-10	1,000 x	<250	69
Method Blank 06-1789 MB	<50	<250	107

Date of Report: 09/07/16
Date Received: 08/29/16
Project: 61901, F&BI 608534

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

Laboratory Code: 608526-01 (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	110	106	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	106	74-139

Date of Report: 09/07/16
Date Received: 08/29/16
Project: 61901, F&BI 608534

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	77	79	63-142	3

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.

608534

SAMPLE CHAIN OF CUSTODY

ME 08-29-16

A03

Report To Doug Kunkel

Company Environmental Partners Inc.

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98038

Phone 425-395-0010 Email Dougk@epi-wa.com

SAMPLERS (signature)

Page # 1 of

PROJECT NAME 61901

PO #

REMARKS

INVOICE TO

TURNAROUND TIME
☑ Standard Turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	DRO (NWTPH-Dx)	ORO (NWTPH-Dx)			Notes
MW-8-S-5.5	01 A-B	8/26/16	0815	Soil	2												
MW-7-S-5.5	02		1031														
BH-1-S-5	03		1203														
BH-1-S-10	04		1222														
BH-1-S-15	05		1230														
BH-1-W-6.5	06		1242	Water													
BH-2-S-5	07 A-B		1350														
BH-2-S-10	08		1404														
BH-2-S-15	09		1419														Samples received at 3.0 °C
BH-2-W-6.8	10		1435	Water													

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Sherrod	EPI	8/29/16	0730
Received by:	Jarel Underdown	Fedex	8-29-16	9:03 AM
Relinquished by:				
Received by:	Nhan Phan	FeBI	8/29/16	10:00

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

October 5, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 609517

Dear Mr Kunkel:

Included are the results from the testing of material submitted on September 29, 2016 from the 61901, F&BI 609517 project. There are 4 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
c: Cynthia Moon
EPI1005R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 29, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 609517project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
609517 -01	MW-4

All quality control requirements were acceptable.

Date of Report: 10/05/16
Date Received: 09/29/16
Project: 61901, F&BI 609517
Date Extracted: 09/30/16
Date Analyzed: 09/30/16

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 41-152)
MW-4 609517-01	68	<250	103
Method Blank 06-2038 MB	<50	<250	78

Date of Report: 10/05/16
Date Received: 09/29/16
Project: 61901, F&BI 609517

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	91	92	63-142	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.

609517

SAMPLE CHAIN OF COUSTODY

ME 09/29/16 C05

Page # 1 of 1

Send Report To Doug Kunkel

Company Environmental Partners, Inc

Address 1180 NW Maple St Suite 310

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (*signature*)	
PROJECT NAME/NO. 61901	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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	DRO + ORO by NWTPH Dx						Notes
MW-4	01	9/29/16	1124	Water	1							X						

Samples received at 4 °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:	Joe Sherod	EPI	9/29/16	1530
Received by:	Michael Erdahl	FCB	9/29/16	1643
Relinquished by:				
Received by:				

Samples received at 4 °C

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

October 7, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 610039

Dear Mr Kunkel:

Included are the results from the testing of material submitted on October 4, 2016 from the 61901, F&BI 610039 project. There are 4 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
c: Cynthia Moon
EPI1007R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 4, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 610039 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
610039 -01	MW-8

All quality control requirements were acceptable.

Date of Report: 10/07/16
Date Received: 10/04/16
Project: 61901, F&BI 610039
Date Extracted: 10/05/16
Date Analyzed: 10/06/16

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 47-140)
MW-8 610039-01	290	<250	82
Method Blank 06-2067 MB2	<50	<250	73

Date of Report: 10/07/16
Date Received: 10/04/16
Project: 61901, F&BI 610039

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	86	84	61-133	2

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.

610039

SAMPLE CHAIN OF CUSTODY

ME 10/4/16 D03

Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98027

Phone 425-395-0010 Email

SAMPLERS (signature)

PROJECT NAME	PO #
61901	
REMARKS	INVOICE TO

Page # ____ of 1

TURNAROUND TIME
☒ Standard Turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	by NWTPH-Dx DRO + ORO				Notes
MW-8	01	10/3/16	0757	Water	1								X				

Samples received at 4 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Sherrod	EPI	10/3/16	~~1430~~ 0700 JS
Received by: 543287	543287	Fedex SDC	10/4/16	10:36A
Relinquished by:				
Received by:	Nhan Phan	FeBI	10/4/16	1122

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 28, 2016

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 612322

Dear Mr Kunkel:

Included are the results from the testing of material submitted on December 21, 2016 from the 61901, F&BI 612322 project. There are 4 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
c: Cynthia Moon
EPI1228R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 21, 2016 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 612322 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
612322 -01	MW-8
612322 -02	MW-7
612322 -03	MW-6
612322 -04	MW-3
612322 -05	MW-4
612322 -06	MW-5
612322 -07	MW-2
612322 -08	MW-1

All quality control requirements were acceptable.

Date of Report: 12/28/16
Date Received: 12/21/16
Project: 61901, F&BI 612322
Date Extracted: 12/22/16
Date Analyzed: 12/22/16

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 47-140)
MW-8 612322-01	140 x	<250	85
MW-7 612322-02	78 x	<250	83
MW-6 612322-03	640 x	<250	94
MW-3 612322-04	99 x	<250	86
MW-4 612322-05	78 x	<250	68
MW-5 612322-06	<50	<250	93
MW-2 612322-07	<50	<250	77
MW-1 612322-08	190 x	<250	89
Method Blank 06-2668 MB	<50	<250	86

Date of Report: 12/28/16
Date Received: 12/21/16
Project: 61901, F&BI 612322

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	112	99	61-133	12

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.

612322 [redacted]

SAMPLE CHAIN OF CUSTODY

ME 12/21/16 [redacted] D04

Page # 1 of 1

Report To Doug Kunkel

Company 1180 NW Maple St

Address EPI

City, State, ZIP Issaquah, WA 98027

Phone 425-395-0010 Email dougk@epi-wa.com

SAMPLERS (signature)

PROJECT NAME	PO #
61901	
REMARKS	INVOICE TO
	EPI

TURNAROUND TIME
- ☑ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	DRO + ORO				Notes
MW-8	01	12-20-16	0813	Water	1								X				
MW-7	02		0841														
MW-6	03		0916														
MW-3	04		0947														
MW-4	05		1052														
MW-5	06		1116														
~~ID~~ MW-2	07		1151														
MW-1	08		1219														
													Samples received at 3 °C				

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Joe Sherrod	EPI	12-21-16	0630
Received by:		Michael Erdahl	F&Bruya		
Relinquished by:					
Received by:					

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

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

May 9, 2017

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: March 2017 Groundwater Sampling Report – Twenty-Second Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *March 2017 Groundwater Sampling Report – Twenty-Second Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was being rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012, a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST had reportedly not been used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the UST decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a water sample from the bottom of the UST excavation during decommissioning activities.

On August 26, 2016, EPI oversaw the drilling and sampling of two soil borings, designated BH-1 and BH-2; and the installation of two conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. BH-1 and BH-2 were drilled east of the former diesel UST to evaluate subsurface conditions immediately downgradient of the former UST. POC well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel UST and existing well MW-6. Well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel UST and existing well MW-6. The purpose of the POC monitoring wells is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST, which is a source area for diesel impacts to groundwater at the Site. Figure 2 shows the locations of borings and monitoring wells relative to Site features.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998, analytical data for groundwater samples from the Site indicate that MW-1 has the greatest and most consistently detected concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH). The data indicated that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system has remained off at MW-1 since August 2014 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs.

The success of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed similar to the air injection wells at MW-1 and are equipped with 1-ft lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until sometime in June when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not running during the June 21, 2016 groundwater sampling event and inspection revealed that the compressor motor was damaged beyond repair due to overheating. Upon questioning onsite workers, EPI was informed that the system had been off for several weeks prior to the sampling event. EPI has instructed the onsite workers to immediately inform EPI or the property owner in the event of a system shut down in the future should one occur.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. This is significantly lower than the standard of 220-230 volts. Although the compressor motor was rated to operate down to 208 volts it is likely that during certain times of the day in the industrial areas near the site, voltage fluctuations below 208 volts caused high amperage of the motor, resulting in excessive heat that eventually seized the motor.

In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt specific motor. The compressor was started up on November 16th, 2016 and flows to the air injection wells were established. The system was running before and after the December 20, 2016 groundwater sampling event. Sometime between the December 20, 2016 sampling event and a site visit by EPI personnel on March 20, 2017, the air injection system shut down. On March 20, 2017, EPI personnel inspected the compressor and determined that the vanes likely need replacing; however, the cause of the compressor failure is still being evaluated. The compressor is currently at the manufacturing facility undergoing repairs. The compressor will be reconnected and returned to service after the repairs have been completed.

GROUNDWATER SAMPLING PROCEDURES

During the March 2017 sampling event groundwater sampling event samples were collected from MW-1, MW-4, MW-6, MW-7, and MW-8. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events. Wells MW-2, MW-3, and MW-5 were not sampled because concentrations of DRPH or HRPH in these wells have consistently been below MTCA Method A CULs, with a single isolated historical exceedance of the MTCA Method A CUL for HRPH in a sample from MW-2 in 2012.

Prior to sampling EPI opened all onsite wells and allowed water levels to equilibrate then measured the depth to water and total depths of all eight monitoring wells using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 90.47 feet Site Datum (EPI 2013 surveyed elevations) in MW-8 to 92.43 feet in MW-2.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the sampling event as shown in Figure 3. These groundwater contours and flow directions are generally consistent with historical data. Groundwater levels were not affected by the air injection system operation during this monitoring event since the system had been off for several weeks prior to sampling.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum temporarily stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

FIELD MEASUREMENTS AND ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B. DO measurements range from 0.18 milligrams per liter (mg/L) in purge water from MW-6 to 1.99 mg/L in purge water from MW-1. Low measured DO concentrations in purge water from the wells indicates anaerobic (reducing) geochemical conditions. The higher measured DO concentration at MW-1 is consistent with historical data, where DO concentrations at MW-1 are generally slightly higher than in other wells due to operation of the air injection system.

- ORP measurements ranged from -77.6 millivolts (mV) in purge water from MW-8 to 47.5 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater, while positive ORP measurements indicate more aerobic geochemical conditions, likely resulting from recent operation of the air injection system near MW-1.

- Field-measured pH values for purge water from the wells ranged from 6.35 in purge water from MW-4 to 6.51 in purge water from MW-6. These measurements are consistent with historical pH measurements at the Site.

- HRPH was not detected in any of the groundwater samples collected during this sampling event.

- DRPH was detected in two of the samples collected from the monitoring wells during this sampling event. The concentrations of DRPH did not exceed the MTCA Method A CUL of 500 µg/L except for MW-6, which contained DRPH concentrations of 580 µg/L. DRPH was detected in the sample collected from MW-1 at a concentration of 53 µg/L.

Time series plots of analytical data for groundwater samples from the eight onsite monitoring wells are presented in Attachment C. The time series plots include trend lines matched to the data indicating DRPH and HRPH concentration trends where applicable.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- HRPH was not detected in any of the groundwater samples collected during this sampling event.

- DRPH was detected in samples from two of the five wells sampled. Only the sample from MW-6 slightly exceeded the MTCA Method A CUL.

- The historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-4, MW-7, and MW-8 have been less than the MTCA Method A CUL quarterly groundwater sampling began in 2011 (MW-4) and September 2016 (MW-7 and MW-8).

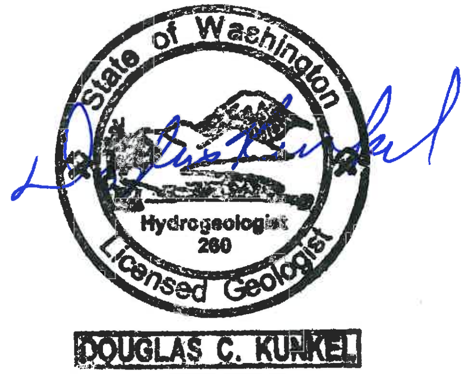
- The DRPH concentration in the sample from MW-6 exceeds the Method A Groundwater CUL during this quarterly monitoring event. The March 2017 concentration of 580 µg/L is only slightly greater than the 500 µg/L CUL. DRPH concentrations in samples from MW-6 appear to be decreasing relative to previous sampling events as shown in the MW-6 time series plot in Attachment C.

EPI is currently evaluating the cause of the damaged vanes in the rotary vane compressor and will repair and re-start the air injection system after the cause of the damage has been identified and mitigated.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist



cc: Mr. Eugene Freeman, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1	Summary of Groundwater Stabilization Parameters
Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Air Injection Remediation System Layout
Figure 3	March 24, 2017 Groundwater Elevations, and Flow Directions

Attachments

Attachment A	Field Notes and Forms
Attachment B	Analytical Laboratory Report
Attachment C	Time Series Plots

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm^2)	Dissolved Oxygen (mg/L)	Temp. (^oC)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	03/24/17	3.33	95.46	92.13	6.39	0.079	1.99	8.7	47.5	NM
MW-2	03/24/17	3.09	95.52	92.43	--	--	--	--	--	NM
MW-3	03/24/17	4.57	95.47	90.90	--	--	--	--	--	NM
MW-4	03/24/17	4.69	95.61	90.92	6.35	0.542	0.23	11.3	-43.5	NM
MW-5	03/24/17	4.61	95.58	90.97	--	--	--	--	--	NM
MW-6	03/24/17	4.52	95.44	90.92	6.51	0.475	0.18	11.9	-56.1	NM
MW-7	03/24/17	3.68	94.28	90.60	6.42	0.690	0.23	10.8	-69.4	NM
MW-8	03/24/17	3.67	94.14	90.47	6.45	0.900	0.33	11.2	-77.6	NM

Notes:

NM = Not Measured

-- Not Sampled

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

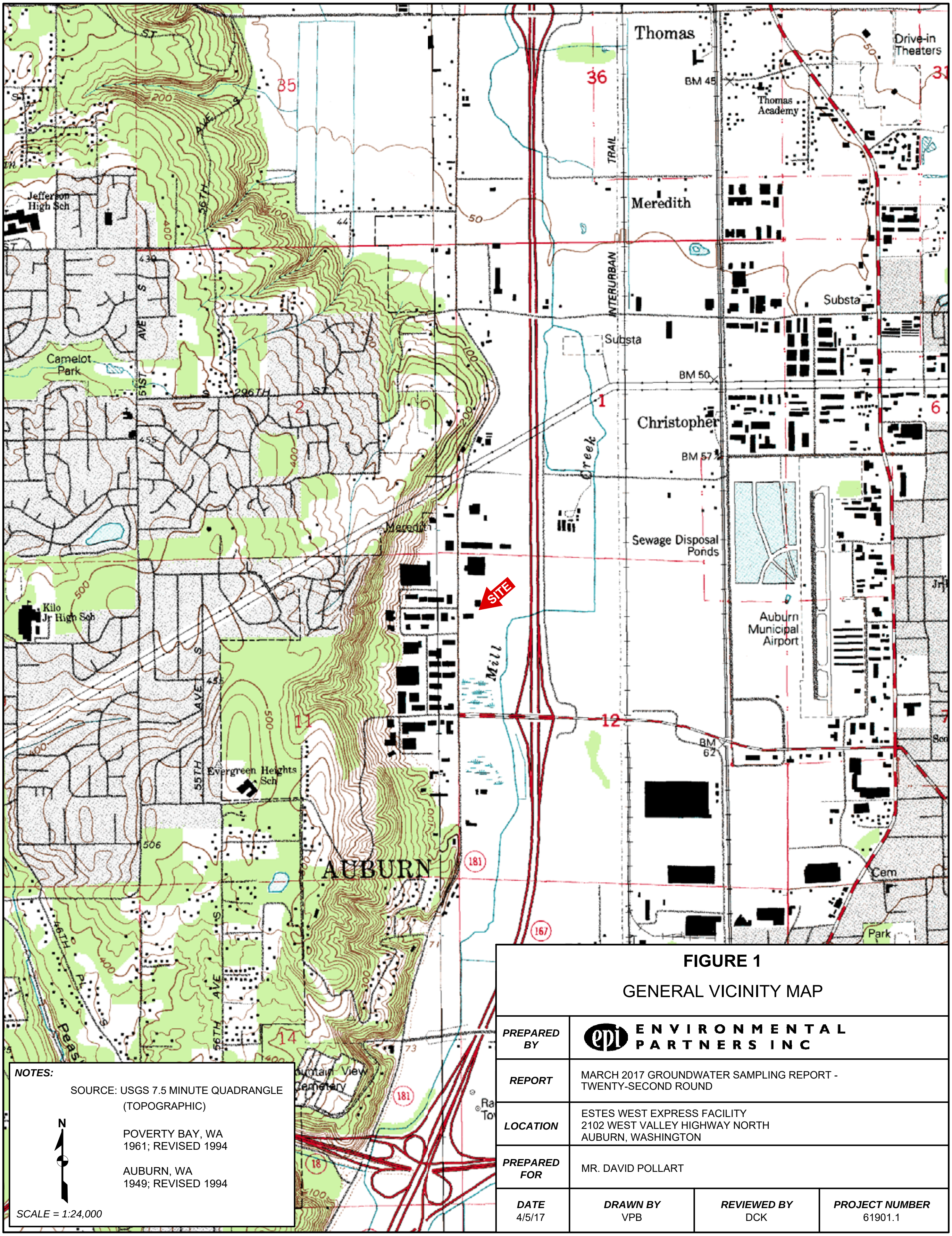
Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	**690**	<250	<1	<1	<1	<3
	5/17/12	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	**1,400**	**400**	NA			
	2/20/14	**700**	**280**	NA			
	5/15/14	**940**	<250	NA			
	8/14/14	<50	<250	NA			
	11/24/14	**220**	<250	NA			
	3/31/15	**340**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**700**	**290**	NA			
	3/3/16	**220**	<250	NA			
	6/21/16	**160**	<250	NA			
	9/16/16	**580**	**420**	NA			
	12/20/16	**190**	<250	NA			
	3/24/17	**53**	<250	NA			
MW-2	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**500**	<250	<1	<1	<1	<3
	2/10/12	<50	<250	<1	<1	<1	<3
	5/17/12	<50	<250	<1	<1	<1	<3
	8/28/12	**470**	**730**	<1	<1	<1	<3
	11/15/12	**140**	<260	<1	<1	<1	<3
	2/14/13	**94**	**260**	<1	<1	<1	<3
	5/16/13	**77**	<250	<1	<1	<1	<3
	8/14/13	**280**	<250	<1	<1	<1	<3
	11/25/13	**53**	<250	NA			
	2/20/14	<50	<250	NA			
	5/15/14	<50	<250	NA			
	8/14/14	**100**	<250	NA			
	11/24/14	<50	<250	NA			
	3/31/15	**57**	<250	NA			
	6/29/15	**97**	<250	NA			
	9/28/15	**150**	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	**86**	<250	NA			
	9/16/16	**95**	<250	NA			
	12/20/16	<50	<250	NA			
MW-3	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**65**	<250	<1	<1	<1	<3
	2/10/12	**100**	<250	<1	<1	<1	<3
	5/17/12	**53**	<250	<1	<1	<1	<3
	8/28/12	**130**	<250	<1	<1	<1	<3
	11/15/12	**120**	<280	<1	<1	<1	<3
	2/14/13	**150**	<250	<1	<1	<1	<3
	5/16/13	**200**	<250	<1	<1	<1	<3
	8/14/13	**140**	<250	<1	<1	<1	<3
	11/25/13	**170**	<250	NA			
	2/20/14	**160**	<250	NA			
	5/15/14	**120**	<250	NA			
	8/14/14	**140**	<250	NA			
	11/24/14	**130**	<250	NA			
	3/31/15	**220**	<250	NA			
	6/29/15	**130**	<250	NA			
	9/28/15	**110**	<250	NA			
	3/3/16	**92**	<250	NA			
	6/21/16	**85**	<250	NA			
	9/16/16	**100**	<250	NA			
	12/20/16	**99**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**72**	<250	<1	<1	<1	<3
	2/10/12	**150**	<250	<1	<1	<1	<3
	5/17/12	**160**	<250	<1	<1	<1	<3
	8/28/12	**200**	<250	<1	<1	<1	<3
	11/15/12	**220**	<250	<1	<1	<1	<3
	2/14/13	**220**	<250	<1	<1	<1	<3
	5/16/13	**210**	<250	<1	<1	<1	<3
	8/14/13	**200**	<250	<1	<1	<1	<3
	2/20/14	**140**	<250	NA			
	5/15/14	**140**	<250	NA			
	8/14/14	**290**	<250	NA			
	11/24/14	**290**	<250	NA			
	3/31/15	**320**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**220**	<250	NA			
	3/3/16	**130**	<250	NA			
	6/21/16	**63**	<250	NA			
	9/29/16	**68**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
MW-5	6/5/13	**160**	<250	<1	<1	<1	<3
	8/14/13	**56**	<250	<1	<1	<1	<3
	11/24/14	<50	<250	NA			
	3/31/15	**52**	<250	NA			
	6/29/15	<50	<250	NA			
	9/28/15	<50	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	<50	<250	NA			
	9/16/16	<50	<250	NA			
	12/20/16	<50	<250	NA			
MW-6	6/5/13	**680**	<250	<1	<1	<1	<3
	8/14/13	**790**	<250	<1	<1	<1	<3
	2/20/14	**740**	<250	NA			
	5/15/14	**950**	<250	NA			
	8/14/14	**1,200**	<250	NA			
	11/24/14	**680**	<250	NA			
	3/31/15	**750**	<250	NA			
	6/29/15	**750**	<250	NA			
	9/28/15	**610**	<250	NA			
	3/3/16	**1,100**	**390**	NA			
	6/21/16	**650**	<250	NA			
	9/16/16	**340**	<250	NA			
	12/20/16	**640**	<250	NA			
	3/24/17	**580**	<250	NA			
MW-7	9/16/16	**140**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
MW-8	10/3/16	**290**	<250	NA			
	12/20/16	**140**	<250	NA			
	3/24/17	<50	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**500**	**500**	**5**	**1,000**	**700**	**1,000**

[a] Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
[b] Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
[c] Analyzed using EPA
[d] Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present
NA - Not analyzed
µg/L = micrograms per liter
Bold = Concentration detected, but less than MTCA Method A Groundwater Cleanup Level
= Concentration is greater than MTCA Method A Groundwater Cleanup Level

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

N

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	MARCH 2017 GROUNDWATER SAMPLING REPORT - TWENTY-SECOND ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
4/5/17	VPB	DCK	61901.1

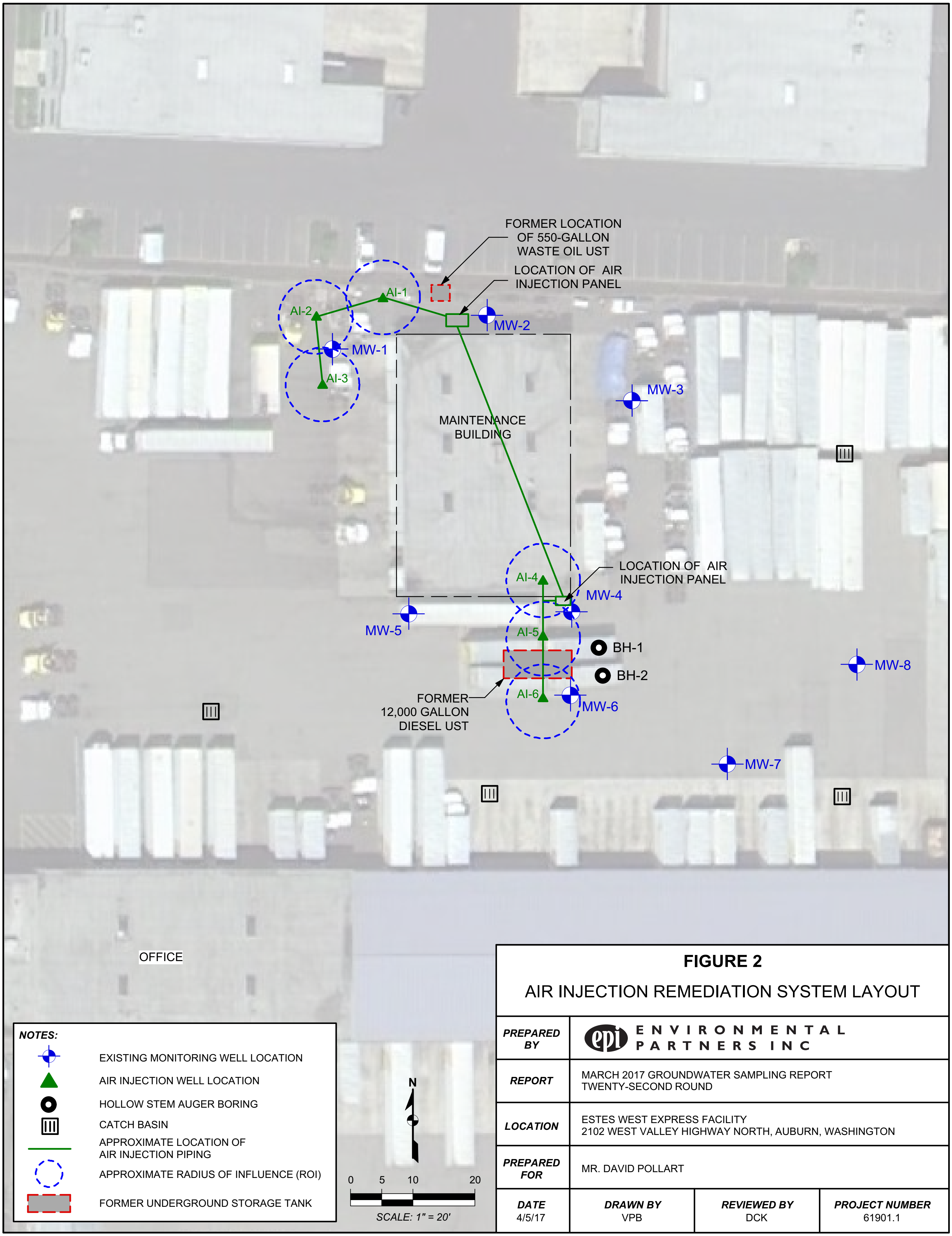


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2017 GROUNDWATER SAMPLING REPORT TWENTY-SECOND ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 4/5/17	**DRAWN BY** VPB	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

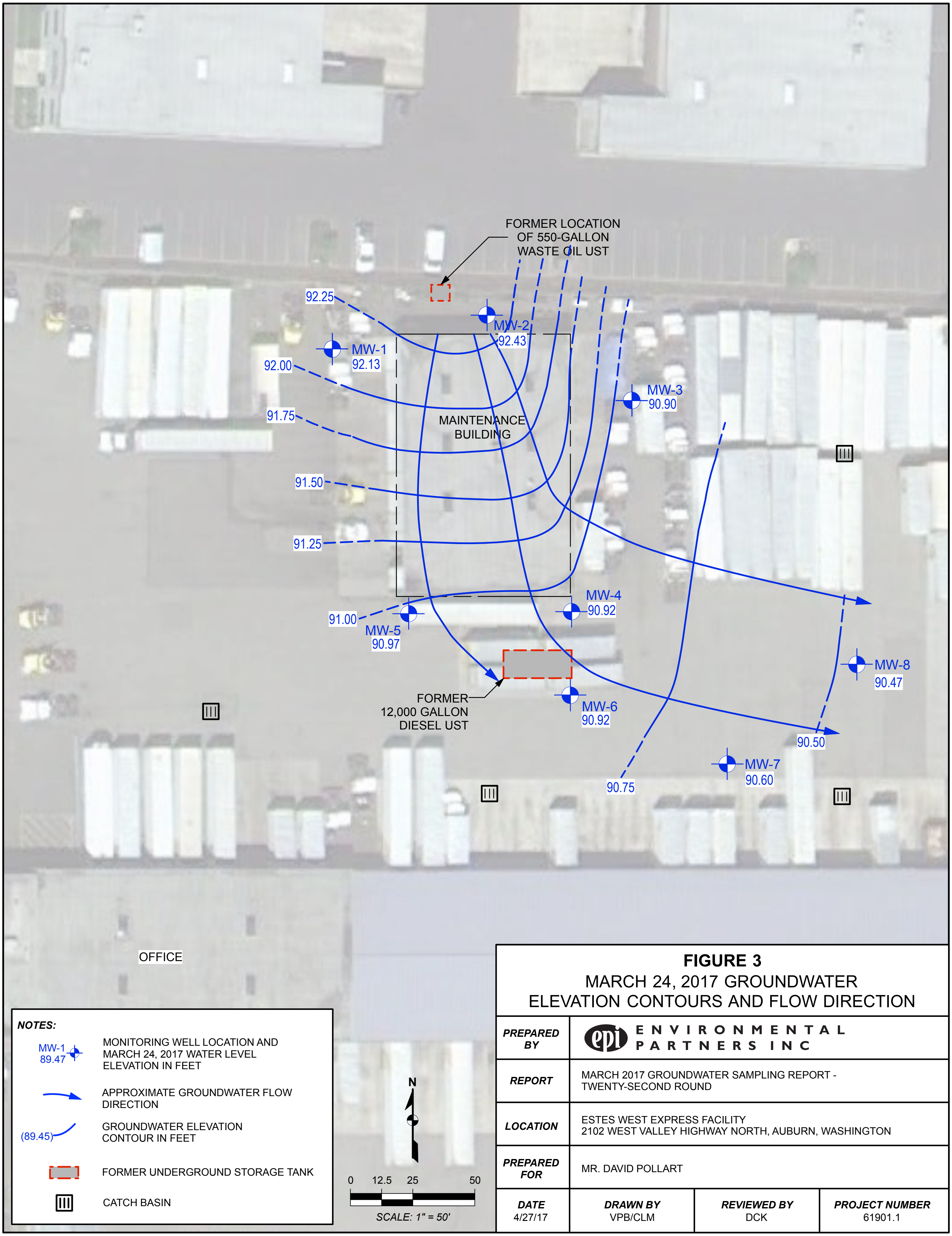


FIGURE 3
MARCH 24, 2017 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2017 GROUNDWATER SAMPLING REPORT - TWENTY-SECOND ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 4/27/17	***DRAWN BY*** VPB/CLM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Field Notes and Forms

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-6	Date	3/24/17
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0912
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. ℃	ORP mV	Turbidity NTU	Appearance/Notes
0917	0.2	6.50	0.483	0.63	11.7	-30.8	—	clear
0920	0.4	6.50	0.483	0.32	11.9	-42.3	—	clear
0923	0.6	6.50	0.481	0.27	11.8	-47.8	—	clear
0926	0.8	6.50	0.478	0.22	11.8	-52.4	—	clear
0929	1.0	6.51	0.475	0.18	11.9	-56.1	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0930	1/2 Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-8	Date	3/24/17
Sample ID:	MW-8	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0735
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0738	0.2	6.49	0.90	1.30	11.2	-60.1	—	clear
0741	0.4	6.46	0.90	0.61	11.3	-74.1	—	clear
0744	0.6	6.46	0.90	0.51	11.2	-75.0	—	clear
0747	0.8	6.46	0.90	0.40	11.2	-76.6	—	clear
0750	1.0	6.45	0.90	0.33	11.2	-77.6		

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0751	1/2 Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-7	Date	3/24/17
Sample ID:	MW-7	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume (2"=0.163 x depth) (4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ____________

Start Time	
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0813	0.1	6.44	0.70	1.33	10.6	-59.2	—	clear
0816	0.3	6.42	0.70	0.34	10.7	-61.8	—	clear
0819	0.5	6.41	0.70	0.30	10.7	-64.1	—	clear
0822	0.7	6.42	0.70	0.29	10.7	-66.5	—	clear
0825	0.9	6.42	0.69	0.23	10.8	-68.7	—	clear
0828	1.1	6.42	0.69	0.23	10.8	-69.4	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0829	½ Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-4	Date	3/24/17
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0843
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0846	0.2	6.34	0.557	0.32	10.9	-27.3	—	clear
0849	0.4	6.34	0.555	0.22	10.9	-32.1	—	clear
0852	0.6	6.34	0.552	0.20	11.0	-35.3	—	clear
0855	0.8	6.34	0.550	0.18	11.1	-38.8	—	clear
0858	1.0	6.35	0.546	0.15	11.2	-41.8	—	clear
0901	1.2	6.35	0.542	0.23	11.3	-43.5	—	clear
~~09~~								

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0902	1/2 Lt-Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-1	Date	3/24/17
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	0945
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0948	0.1	7.02	0.091	2.74	8.7	-47.3	—	clear
0951	0.3	6.62	0.084	1.99	8.7	-12.7	—	clear
0954	0.5	6.52	0.082	2.04	8.6	4.5	—	clear
0957	0.7	6.47	0.082	2.09	8.6	19.1	—	clear
1000	0.9	6.46	0.084	2.19	8.7	26.5	—	clear
1003	1.1	6.44	0.082	2.13	8.7	31.7	—	clear
1006	1.3	6.42	0.080	2.08	8.7	37.6	—	clear
1009	1.5	6.40	0.080	1.94	8.7	42.7	—	clear
1012	1.7	6.39	0.079	1.99	8.7	47.5	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1013	1/2 Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

udy: 55°F
3/16 Scope: MW-8 Re-sample
Load up equipment @ EPI
J. Sherrod on-site, setup
on MW-8 to remove
gallons of H_2O before
flow sampling
Calibrate YSI
Purge out ≈ 5 gallons, setup
place tubing to low flow
YSI calibration complete
sample MW-8 @ 0757, @
J. Sherrod off-site to drop
off @ Lab.

Rain: 45°F
3/24/17 Scope: Quarterly Sampling
0550 J. Sherrod on-site, open all well heads and prepare for dtw collection.

Well	DTW
MW-8	~~3.46~~ 3.67
MW-7	3.68
MW-6	4.52
MW-4	4.69
MW-3	4.57
MW-5	4.61
MW-1	3.33
MW-2	3.09

0620 All well caps tight and in good condition. Wells to be sampled today are MW-1, MW-4, MW-6, MW-7, MW-8
0700 Complete DTW Collection, begin calibrating YSI.
0720 All soil + water drum have been moved off-site.
0735 Setup on MW-8

3/24/17 cont.

1050 EPI completed GW sampling. No drum located on-site, will be returning later today w/ drum to dispose of purge H_2O.

1100 EPI off-site to take samples to lab and pickup drum.

1310 EPI on-site to drop off drum for purge H_2O. Drum placed on N side of mechanic shop.

Damaged Monuments

MW-1 : All bolts stripped
MW-5 : 1 thread tab broken
MW-3 : Stripped
MW-4 : 2 thread tabs broken
MW-6 : All bolts stripped
MW-8 : Monument in large pot hole. Monument being damaged by truck traffic.

1330 EPI off-site

Attachment B
Analytical Laboratory Report

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

March 28, 2017

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 703427

Dear Mr Kunkel:

Included are the results from the testing of material submitted on March 24, 2017 from the 61901, F&BI 703427 project. There are 4 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
c: Cynthia Moon
EPI0328R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 24, 2017 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 703427 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
703427 -01	MW-8
703427 -02	MW-7
703427 -03	MW-4
703427 -04	MW-6
703427 -05	MW-1

All quality control requirements were acceptable.

Date of Report: 03/28/17
Date Received: 03/24/17
Project: 61901, F&BI 703427
Date Extracted: 03/24/17
Date Analyzed: 03/24/17

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-8 703427-01	<50	<250	92
MW-7 703427-02	<50	<250	108
MW-4 703427-03	<50	<250	110
MW-6 703427-04	580 x	<250	108
MW-1 703427-05	53 x	<250	86
Method Blank 07-611 MB	<50	<250	94

Date of Report: 03/28/17
Date Received: 03/24/17
Project: 61901, F&BI 703427

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	95	91	58-134	4

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.

427
~~ME~~ 703424/26 ND

SAMPLE CHAIN OF CUSTODY

ME 3/24/17

[redacted] 1 of 1 A03

Report To Doug Kunkel

Company 1180 nw maple St.

Address EPI

City, State, ZIP Issaquah, WA

Phone 425-395-0010 Email dougk@epi-wa.com

SAMPLERS (signature)	
PROJECT NAME 61901	PO #
REMARKS	INVOICE TO

TURNAROUND TIME
☑ Standard Turnaround
☐ RUSH
Rush charges authorized by:

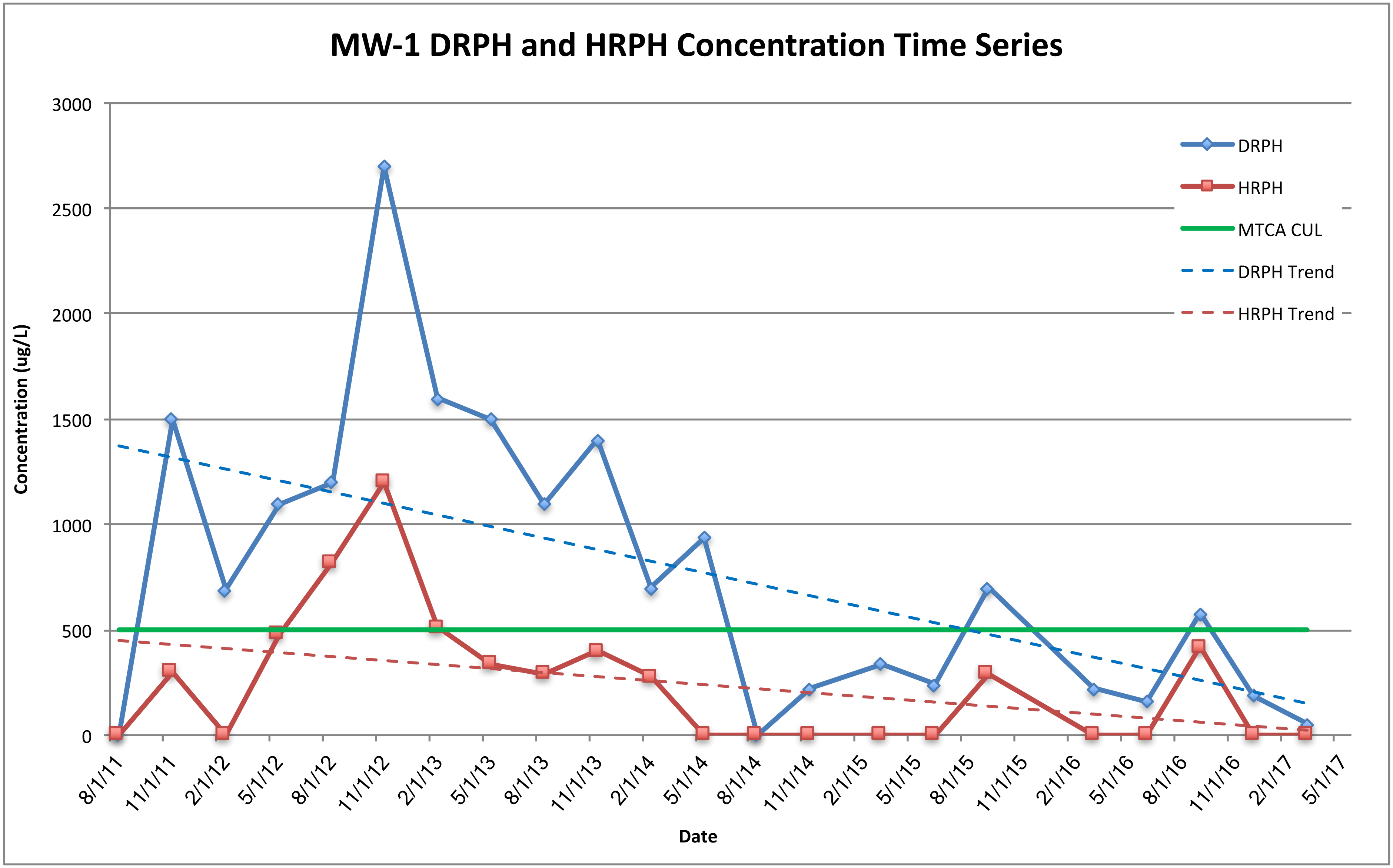
SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

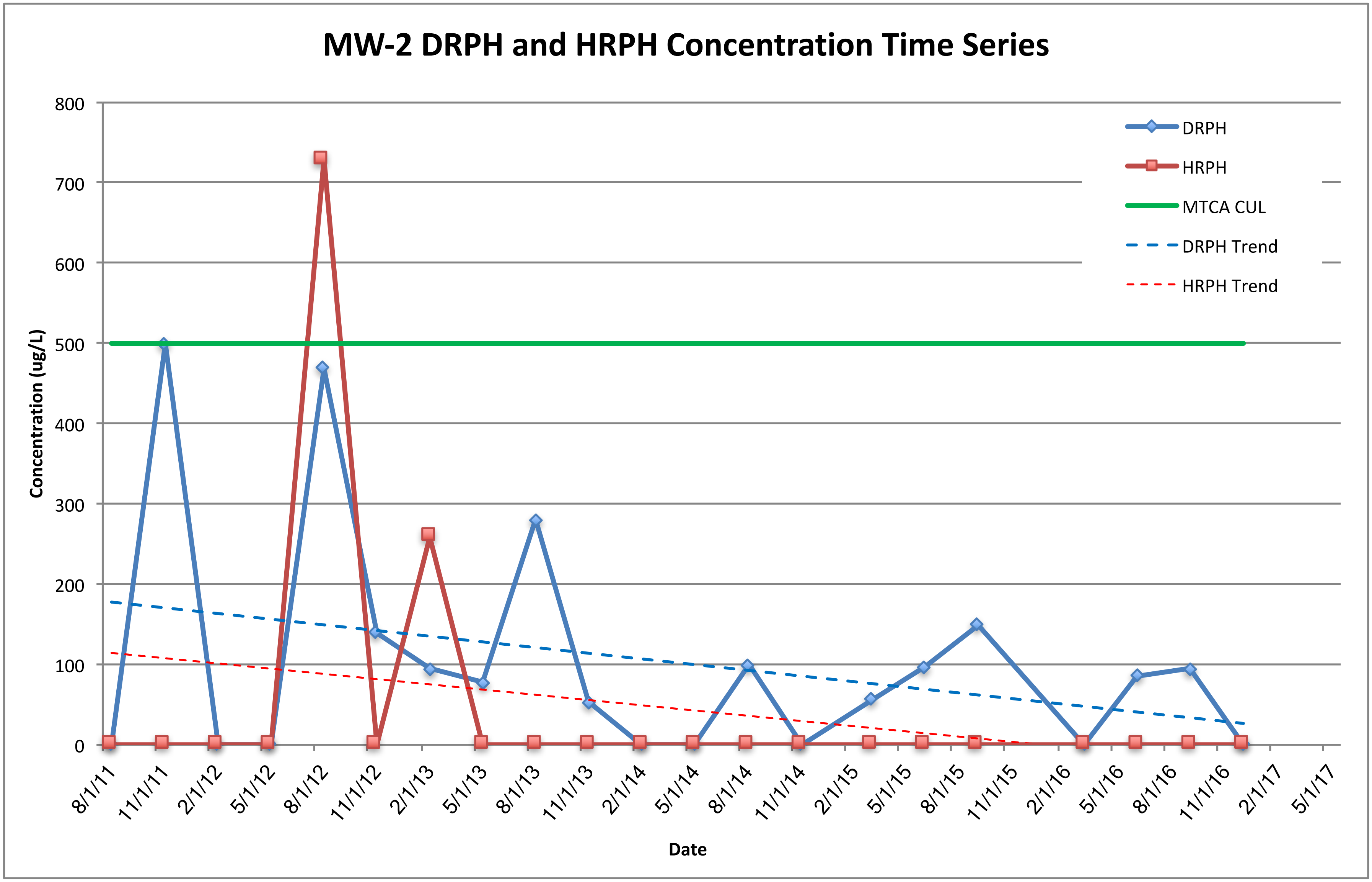
						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	DRO + ORO TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
MW-8	01	3-24-17	0751	water	1		X										
MW-7	02	↓	0829	↓	↓		↓										
MW-4	03		0902														
MW-6	04		0930														
MW-1	05		1013														
												Samples received at 2 °C					

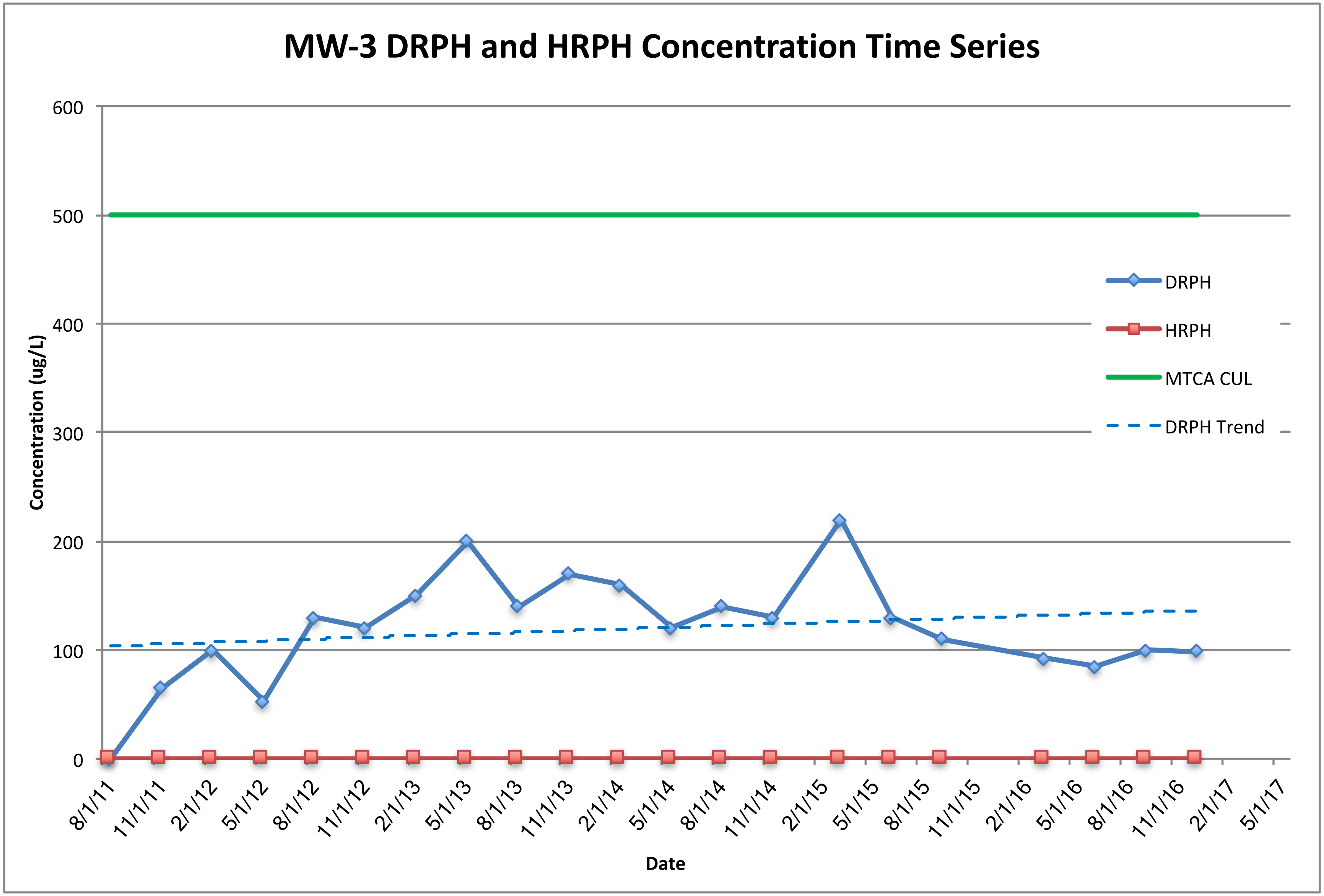
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Sherrod	EPI	3/24/17	1120
Received by:	Nhan Phan	FeBT	3/24/17	1120
Relinquished by:				
Received by:				

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

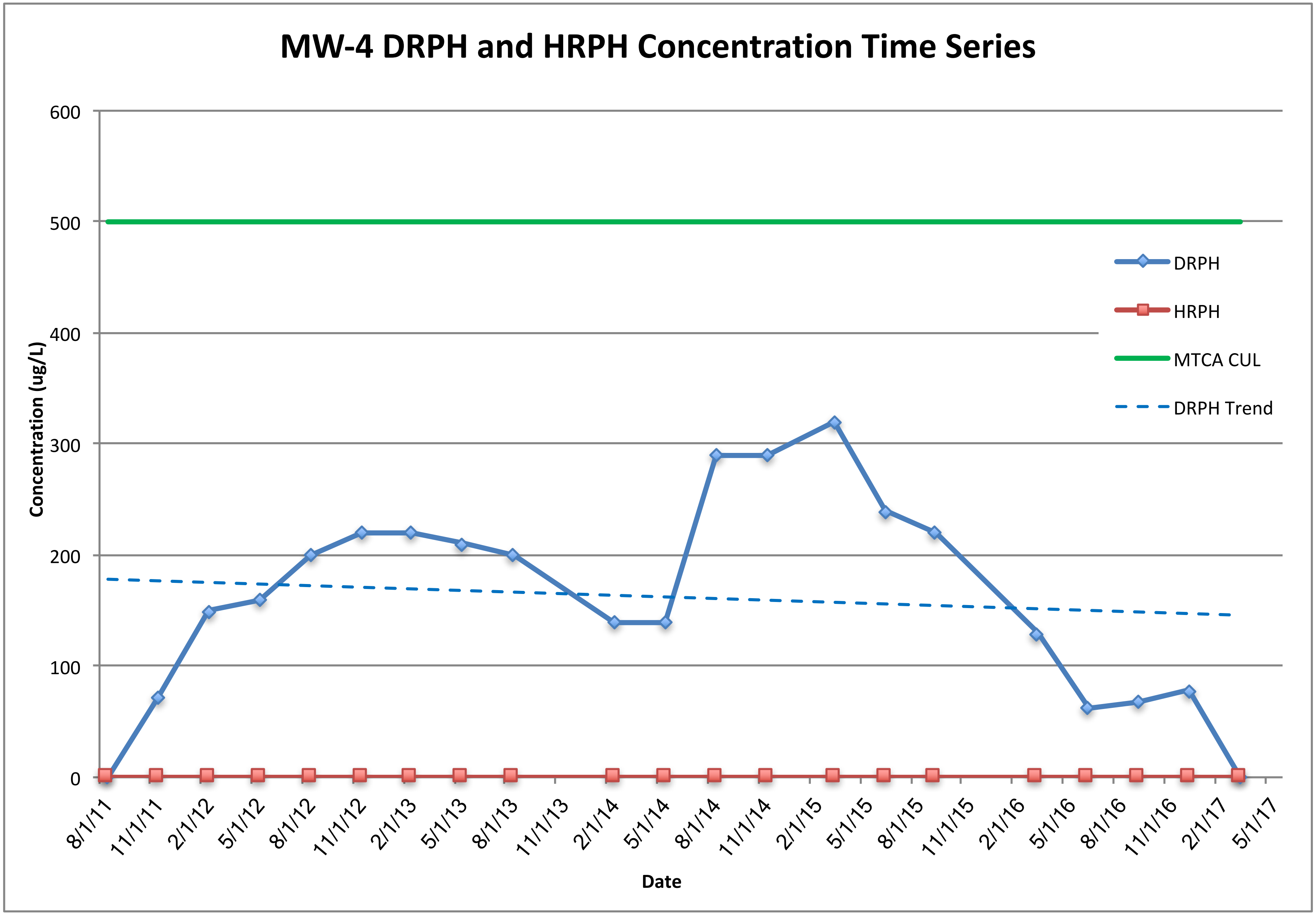
Attachment C
Time Series Plots


MW-1 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
3000
2500
2000
1500
1000
500
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend

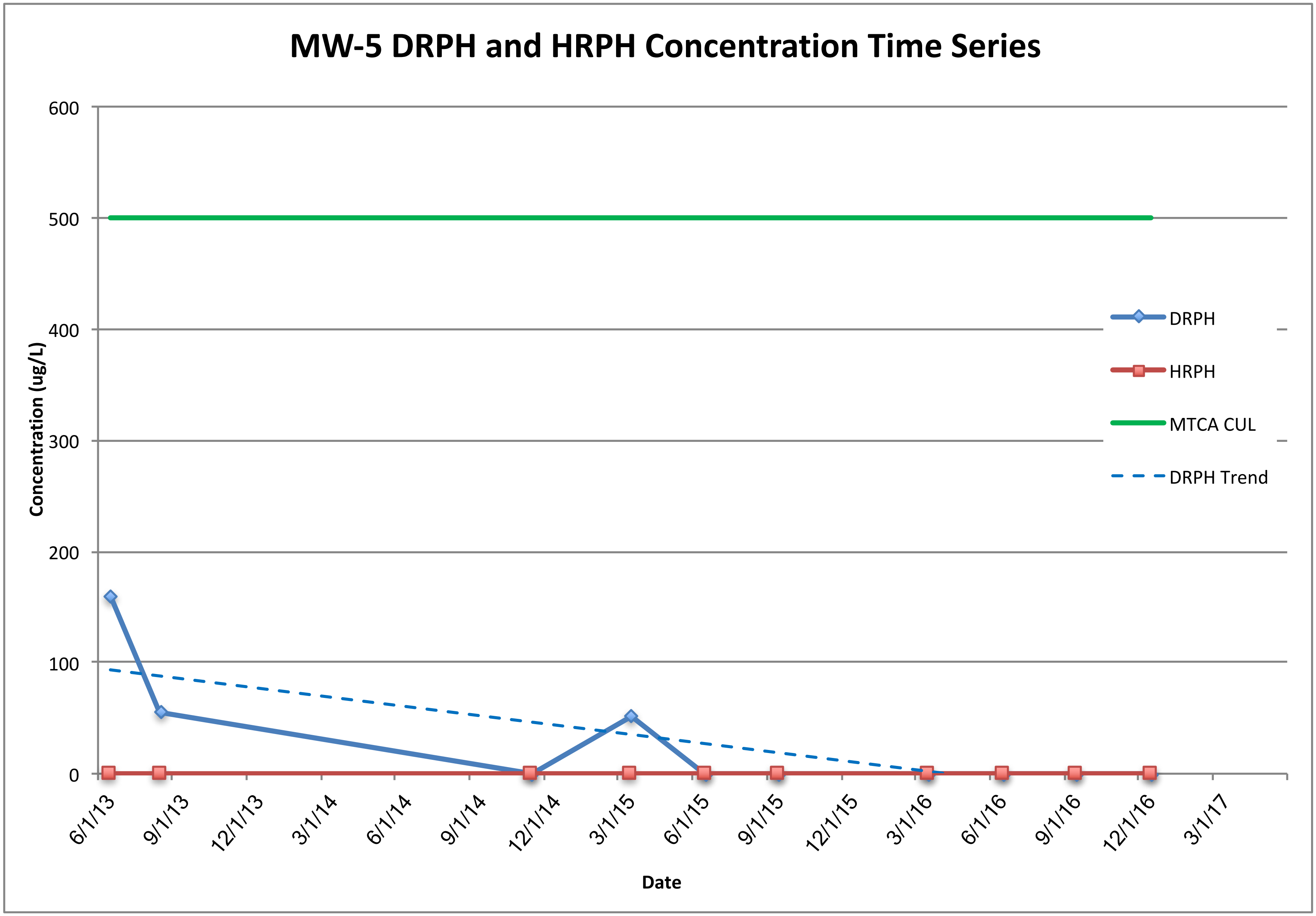

MW-2 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
800
700
600
500
400
300
200
100
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend

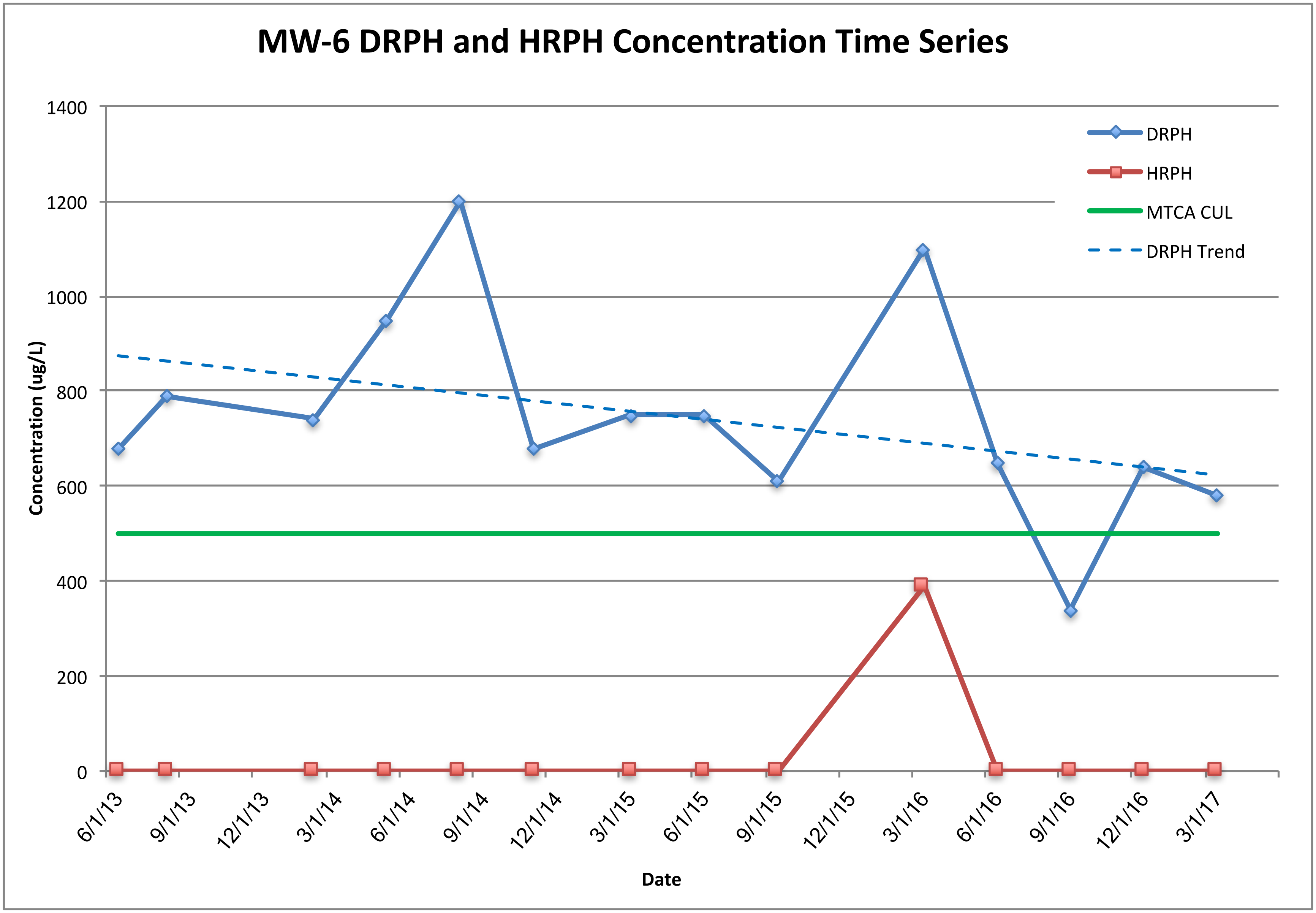


MW-3 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend

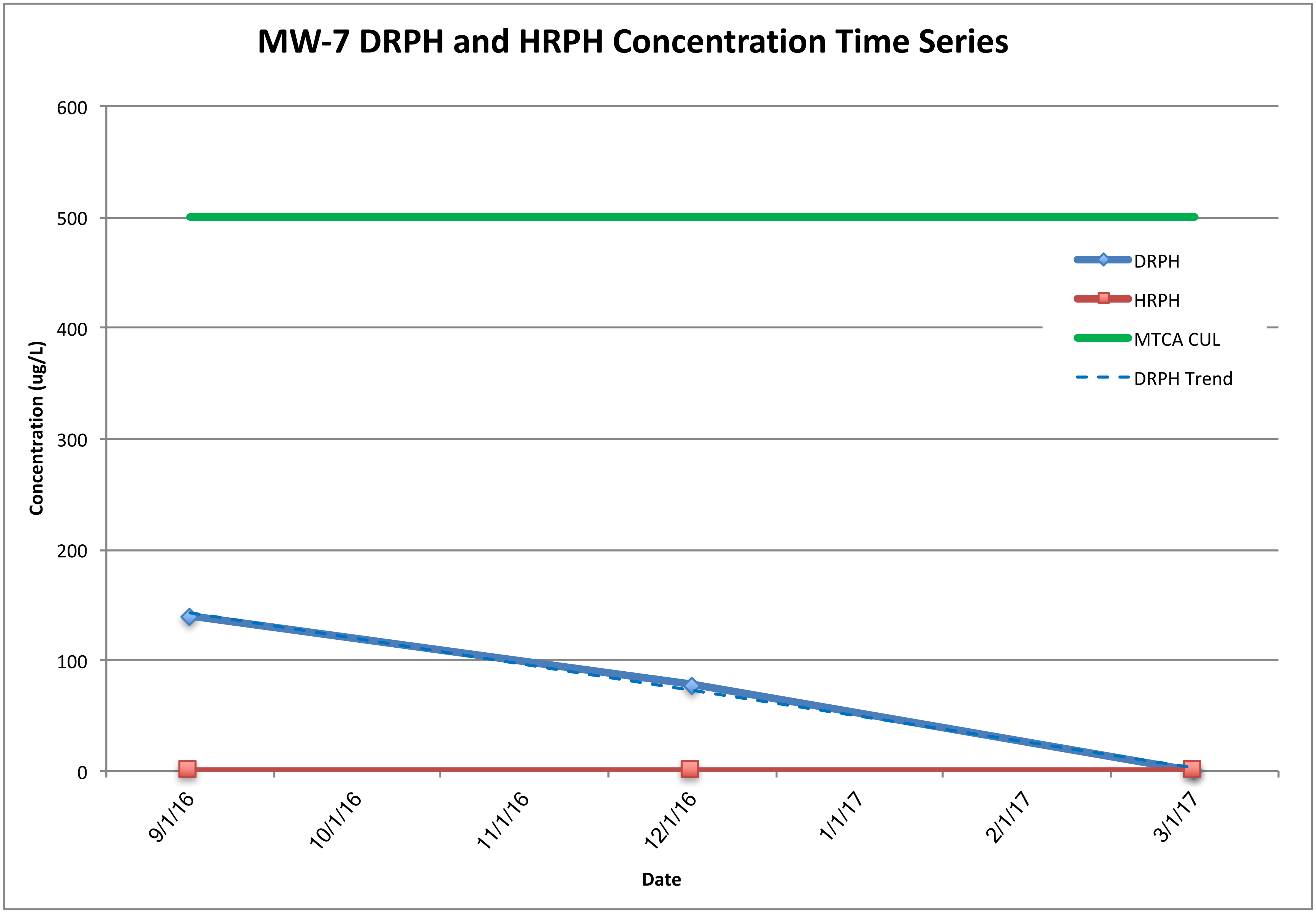


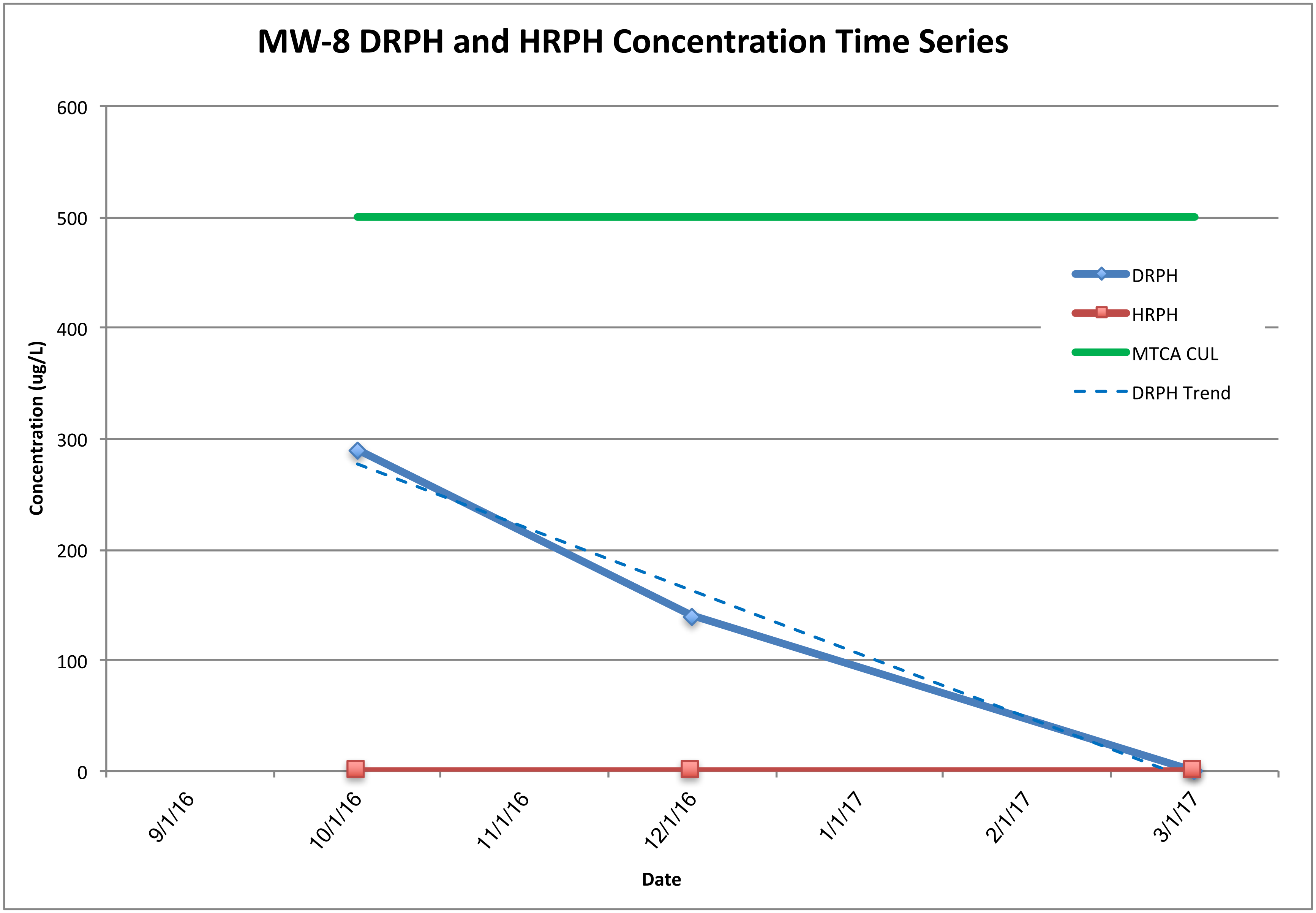
MW-4 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
DRPH
HRPH
MTCA CUL
DRPH Trend
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
Date


MW-5 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend



MW-6 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend


MW-7 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
DRPH
HRPH
MTCA CUL
DRPH Trend
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
Date



MW-8 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend

July 11, 2017

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: June 2017 Groundwater Sampling Report – Twenty-Third Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *June 2017 Groundwater Sampling Report – Twenty-Third Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until “this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.” The NFA letter also stipulated that analytical results for groundwater compliance “shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils.” Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA Method A CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012, a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The UST was reportedly not used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to that report for additional details regarding the UST decommissioning activities and soil and groundwater sampling results.

Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based petroleum hydrocarbon detections in a water sample from the bottom of the UST excavation that was collected during decommissioning activities.

On August 26, 2016, EPI oversaw the drilling and sampling of two soil borings, designated BH-1 and BH-2; and the installation of two conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. BH-1 and BH-2 were drilled east of the former diesel UST to evaluate subsurface conditions immediately downgradient of the former UST. POC well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel UST and existing well MW-6. Well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel UST and existing well MW-6. The purpose of the POC monitoring wells is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST, which is a source area for diesel impacts to groundwater at the Site. Figure 2 shows the locations of borings and monitoring wells relative to Site features.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998, analytical data for groundwater samples from the Site indicate that MW-1 has the greatest and most consistently detected concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH). The data indicate that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and compressor system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system remained temporarily off at MW-1 from August 2014 to April 2015 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs and to provide data intended to demonstrate that contaminant concentration rebound was not occurring.

The success of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed like the air injection wells at MW-1 and are equipped with 1-ft. lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14- to 15-ft bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until June 2015 when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not running during the June 21, 2016 groundwater sampling event and inspection revealed that the compressor motor was damaged beyond repair due to overheating. Upon questioning onsite workers, EPI was informed that the system had been off for several weeks prior to the sampling event. EPI has instructed the onsite workers to immediately inform EPI or the property owner in the event of a system shut down in the future should one occur.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. This is significantly lower than the standard of 220-230 volts. Although the compressor motor was rated to operate down to 208 volts it is likely that during certain times of the day in the industrial areas near the site, voltage fluctuations below 208 volts caused high amperage of the motor, resulting in excessive heat that eventually seized the motor.

In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt specific motor. The compressor was started up on November 16th, 2016 and flows to the air injection wells were established. The system was running before and after the December 20, 2016 groundwater sampling event. Sometime between the December 20, 2016 sampling event and a site visit by EPI personnel on March 20, 2017, the air injection system shut down. On March 20, 2017, EPI personnel inspected the compressor and determined that the vanes were destroyed and must be replaced. The repair work was completed under warranty at the manufacturer's facility.

The repaired compressor was reconnected and returned to service on June 19, 2017. Both areas of the air injection system MW-1 and MW-6, were back in operation following the completion of groundwater sampling on June 19, 2017.

GROUNDWATER SAMPLING PROCEDURES

During the June 16, 2017 sampling event groundwater sampling event samples were collected from MW-1, MW-2, MW-3, MW-4, MW-6, and MW-7. Well MW-8 was under water resulting from heavy rains and was sampled during a separate site visit on June 26, 2017. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH because GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events.

Prior to sampling EPI opened all onsite wells, except MW-8, which was under water as note above, and allowed water levels to equilibrate then measured the depth to water and total depths using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. Groundwater elevations ranged from 89.93 feet Site Datum (EPI 2013 surveyed elevations) in MW-8 to 91.21 feet in MW-1.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the sampling event as shown in Figure 3. These groundwater contours and flow directions are generally consistent with historical data. Groundwater levels were not affected by the air injection system operation during this monitoring event since the system had been off for several months and was re-started after the water level measurements were completed.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes are included in Attachment A.

Purge water was transferred to a 55-gallon drum temporarily stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment B.

FIELD MEASUREMENTS AND ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment B.

The following observations were noted for the field parameter data presented in Table 1.

- Depth to water measurements ranged from 4.21 ft. below top of casing (TOC) in MW-8 to 5.36 ft. below TOC in MW-4. The shallow and flat water table is consistent with historical data for the Site.

- Field-measured pH values for purge water from the wells ranged from 6.00 in purge water from MW-2 to 6.48 in purge water from MW-6. These measurements are consistent with historical pH measurements at the Site.

- DO measurements range from 0.23 milligrams per liter (mg/L) in purge water from MW-6 to 0.93 mg/L in purge water from MW-1. Low measured DO concentrations in purge water from the wells indicates anaerobic (reducing) geochemical conditions, which was anticipated because the air injection system was not operational since sometime between December 2016 and March 2017. The air injection system was repaired and re-started during the June 16, 2017 Site visit.

- ORP measurements ranged from -78.9 millivolts (mV) in purge water from MW-6 to +103.1 mV in purge water from MW-2. ORP at MW-1 was also positive and was measured at 76.0 mV. The remaining ORP measurements were all negative. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater, while positive ORP measurements indicate more aerobic geochemical conditions, likely resulting from historical operation of the air injection system near MW-1 and MW-2.

The following observations were noted for the analytical data presented in Table 2.

- HRPH was detected in groundwater samples collected from MW-1 and MW-6, at concentrations of 560 and 280 µg/L, respectively, during this sampling event. The 560 µg/L HRPH detection in the sample from MW-1 exceeds the MTCA Method A CUL of 500 µg/L. This is the first HRPH exceedance at MW-1 since February 2013.

- DRPH was detected in samples collected from all 8 monitoring wells sampled during this event at concentrations ranging from 55 µg/L in the sample from MW-5 to 970 µg/L in the sample from MW-6. Concentrations of DRPH did not exceed the MTCA Method A CUL of 500 µg/L except for the sample from MW-6.

Time series plots of analytical data for groundwater samples from the eight onsite monitoring wells are presented in Attachment C. The time series plots include trend lines matched to the data indicating DRPH and HRPH concentration trends where applicable.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- The Puget Sound area experienced a very wet spring in 2017 with approximately 28 inches of rain reported at SeaTac Airport from January to June 2017. The record setting rainfall amounts experienced prior to this sampling event likely flushed and mobilized petroleum hydrocarbons from the vadose zone into the shallow groundwater. We anticipate that the increased concentrations of HRPH and DRPH noted during this event will be a temporary weather-related phenomenon.

- Samples from MW-3, MW-4, MW-5, MW-7, and MW-8 have never had a detection for HRPH.

- HRPH was detected two groundwater samples collected at MW-1 and MW-6 during this sampling event. Only the sample from MW-1 had an HRPH concentration slightly greater than the MTCA Method A CUL.

- DRPH was detected in groundwater samples from all 8 wells sampled. Only the sample from MW-6 had a DRPH concertation that exceeded the MTCA Method A CUL.

- Historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-2, MW-3, and MW-4 have consistently been less than the MTCA Method A CUL quarterly groundwater sampling began in 2011. DRPH concentrations in samples from MW-5, MW-7, and MW-8 have consistently been less than the MCTA Method A CUL since its installation in 2013 for MW-5 and 2016 for MW-7 and MW-8.

- The DRPH concentration in the sample from MW-6 exceeds the Method A Groundwater CUL during this quarterly monitoring event. DRPH concentrations in samples from MW-6 continue to trend downward as shown in the MW-6 time-series plot in Attachment C.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

State of Washington
Hydrogeologist
260
Licensed Geologist
DOUGLAS C. KUNKEL

Douglas Kunkel, L.G., L.H.G.
Principal Hydrogeologist

cc: Ms. Louise Bardy, WDOE-Northwest Regional Office

ENCLOSURES

Tables

Table 1	Summary of Groundwater Stabilization Parameters
Table 2	Quarterly Groundwater Monitoring Analytical Results in µg/L

Figures

Figure 1	General Vicinity Map
Figure 2	Air Injection Remediation System Layout
Figure 3	June 16, 2017 Groundwater Elevation Contours and Flow Direction

Attachments

Attachment A	Field Notes and Forms
Attachment B	Analytical Laboratory Report
Attachment C	Time Series Plots

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation	pH	Specific Conductance (mS/cm^2)	Dissolved Oxygen (mg/L)	Temp. (°C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	06/16/17	4.25	95.46	91.21	6.02	0.151	0.93	17.4	76.0	NM
MW-2	06/16/17	4.75	95.52	90.77	6.00	0.161	0.51	14.6	103.1	NM
MW-3	06/16/17	5.23	95.47	90.24	6.34	0.660	0.29	14.7	-59.3	NM
MW-4	06/16/17	5.36	95.61	90.25	6.32	0.630	0.24	13.5	-59.3	NM
MW-5	06/16/17	5.27	95.58	90.31	6.30	0.481	0.30	13.9	-43.2	NM
MW-6	06/16/17	5.18	95.44	90.26	6.48	0.517	0.23	15.5	-78.9	NM
MW-7	06/16/17	4.33	94.28	89.95	6.34	0.630	0.31	14.3	-71.9	NM
MW-8	06/26/17	4.21	94.14	89.93	6.28	0.930	0.28	16.4	-54.40	NM

Notes:

NM = Not Measured

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

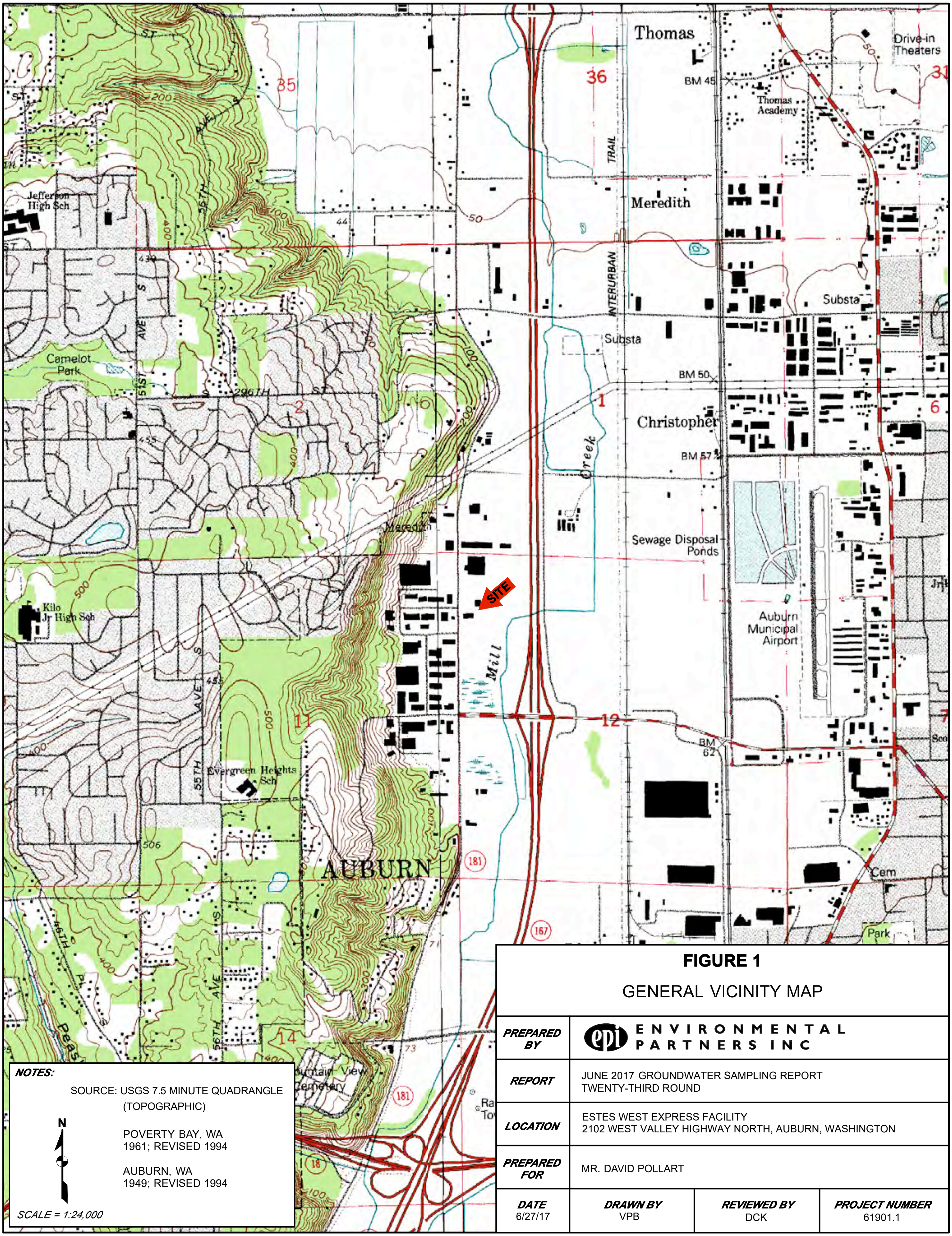
Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	**690**	<250	<1	<1	<1	<3
	5/17/12	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	**1,400**	**400**	NA			
	2/20/14	**700**	**280**	NA			
	5/15/14	**940**	<250	NA			
	8/14/14	<50	<250	NA			
	11/24/14	**220**	<250	NA			
	3/31/15	**340**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**700**	**290**	NA			
	3/3/16	**220**	<250	NA			
	6/21/16	**160**	<250	NA			
	9/16/16	**580**	**420**	NA			
	12/20/16	**190**	<250	NA			
	3/24/17	**53**	<250	NA			
	6/19/17	**310**	**560**	NA			
MW-2	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**500**	<250	<1	<1	<1	<3
	2/10/12	<50	<250	<1	<1	<1	<3
	5/17/12	<50	<250	<1	<1	<1	<3
	8/28/12	**470**	**730**	<1	<1	<1	<3
	11/15/12	**140**	<260	<1	<1	<1	<3
	2/14/13	**94**	**260**	<1	<1	<1	<3
	5/16/13	**77**	<250	<1	<1	<1	<3
	8/14/13	**280**	<250	<1	<1	<1	<3
	11/25/13	**53**	<250	NA			
	2/20/14	<50	<250	NA			
	5/15/14	<50	<250	NA			
	8/14/14	**100**	<250	NA			
	11/24/14	<50	<250	NA			
	3/31/15	**57**	<250	NA			
	6/29/15	**97**	<250	NA			
	9/28/15	**150**	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	**86**	<250	NA			
	9/16/16	**95**	<250	NA			
	12/20/16	<50	<250	NA			
	6/19/17	**61**	<250	NA			
MW-3	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**65**	<250	<1	<1	<1	<3
	2/10/12	**100**	<250	<1	<1	<1	<3
	5/17/12	**53**	<250	<1	<1	<1	<3
	8/28/12	**130**	<250	<1	<1	<1	<3
	11/15/12	**120**	<280	<1	<1	<1	<3
	2/14/13	**150**	<250	<1	<1	<1	<3
	5/16/13	**200**	<250	<1	<1	<1	<3
	8/14/13	**140**	<250	<1	<1	<1	<3
	11/25/13	**170**	<250	NA			
	2/20/14	**160**	<250	NA			
	5/15/14	**120**	<250	NA			
	8/14/14	**140**	<250	NA			
	11/24/14	**130**	<250	NA			
	3/31/15	**220**	<250	NA			
	6/29/15	**130**	<250	NA			
	9/28/15	**110**	<250	NA			
	3/3/16	**92**	<250	NA			
	6/21/16	**85**	<250	NA			
	9/16/16	**100**	<250	NA			
	12/20/16	**99**	<250	NA			
	6/19/17	**310**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**72**	<250	<1	<1	<1	<3
	2/10/12	**150**	<250	<1	<1	<1	<3
	5/17/12	**160**	<250	<1	<1	<1	<3
	8/28/12	**200**	<250	<1	<1	<1	<3
	11/15/12	**220**	<250	<1	<1	<1	<3
	2/14/13	**220**	<250	<1	<1	<1	<3
	5/16/13	**210**	<250	<1	<1	<1	<3
	8/14/13	**200**	<250	<1	<1	<1	<3
	2/20/14	**140**	<250	NA			
	5/15/14	**140**	<250	NA			
	8/14/14	**290**	<250	NA			
	11/24/14	**290**	<250	NA			
	3/31/15	**320**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**220**	<250	NA			
	3/3/16	**130**	<250	NA			
	6/21/16	**63**	<250	NA			
	9/29/16	**68**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
	6/19/17	**110**	<250	NA			
MW-5	6/5/13	**160**	<250	<1	<1	<1	<3
	8/14/13	**56**	<250	<1	<1	<1	<3
	11/24/14	<50	<250	NA			
	3/31/15	**52**	<250	NA			
	6/29/15	<50	<250	NA			
	9/28/15	<50	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	<50	<250	NA			
	9/16/16	<50	<250	NA			
	12/20/16	<50	<250	NA			
	6/19/17	**55**	<250	NA			
MW-6	6/5/13	**680**	<250	<1	<1	<1	<3
	8/14/13	**790**	<250	<1	<1	<1	<3
	2/20/14	**740**	<250	NA			
	5/15/14	**950**	<250	NA			
	8/14/14	**1,200**	<250	NA			
	11/24/14	**680**	<250	NA			
	3/31/15	**750**	<250	NA			
	6/29/15	**750**	<250	NA			
	9/28/15	**610**	<250	NA			
	3/3/16	**1,100**	**390**	NA			
	6/21/16	**650**	<250	NA			
	9/16/16	**340**	<250	NA			
	12/20/16	**640**	<250	NA			
	3/24/17	**580**	<250	NA			
	6/19/17	**970**	**280**	NA			
MW-7	9/16/16	**140**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
	6/19/17	**100**	<250	NA			
MW-8	10/3/16	**290**	<250	NA			
	12/20/16	**140**	<250	NA			
	3/24/17	<50	<250	NA			
	6/26/17	**180**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**500**	**500**	**5**	**1,000**	**700**	**1,000**

[a] Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
[b] Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
[c] Analyzed using EPA
[d] Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

N

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	JUNE 2017 GROUNDWATER SAMPLING REPORT TWENTY-THIRD ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
6/27/17	VPB	DCK	61901.1

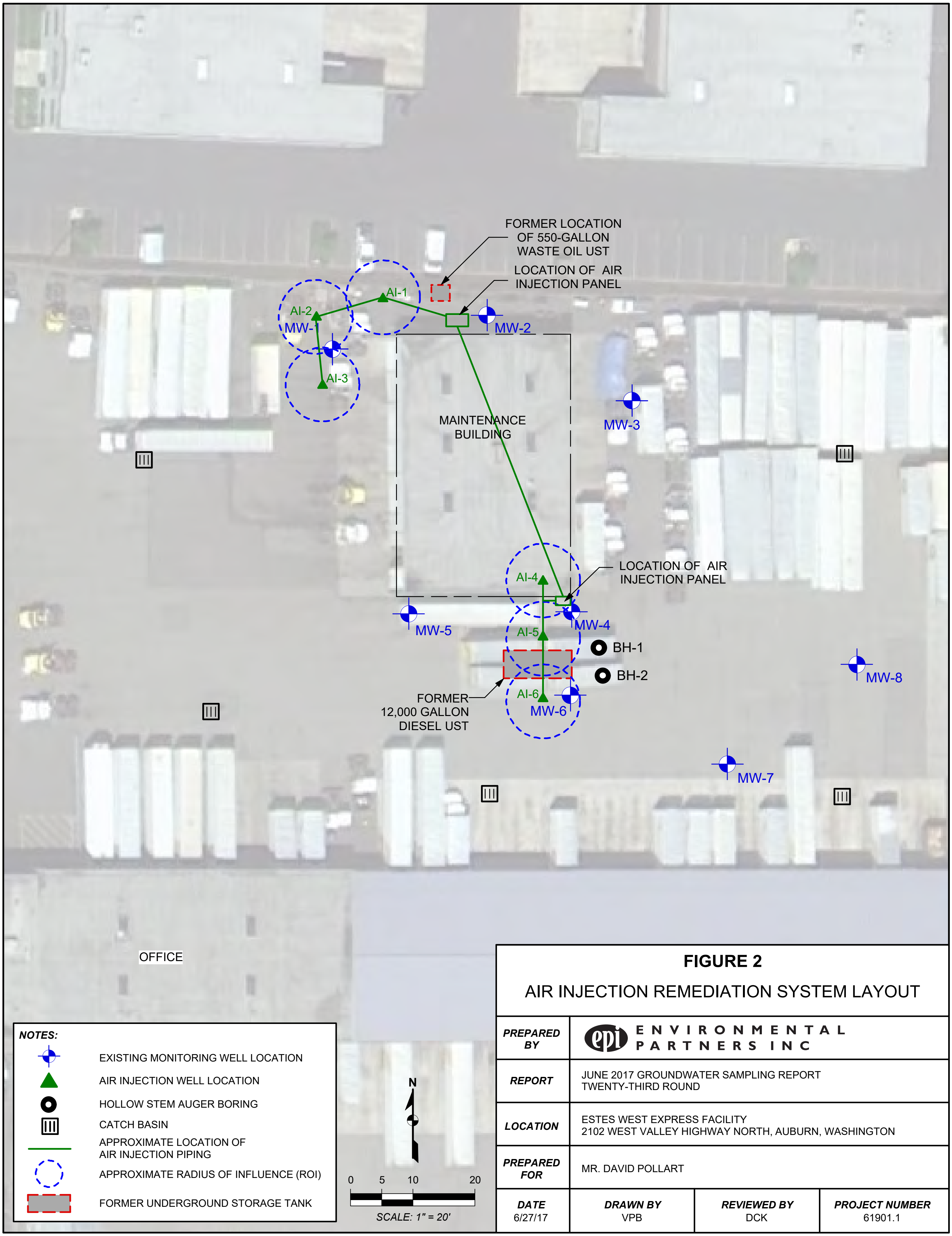
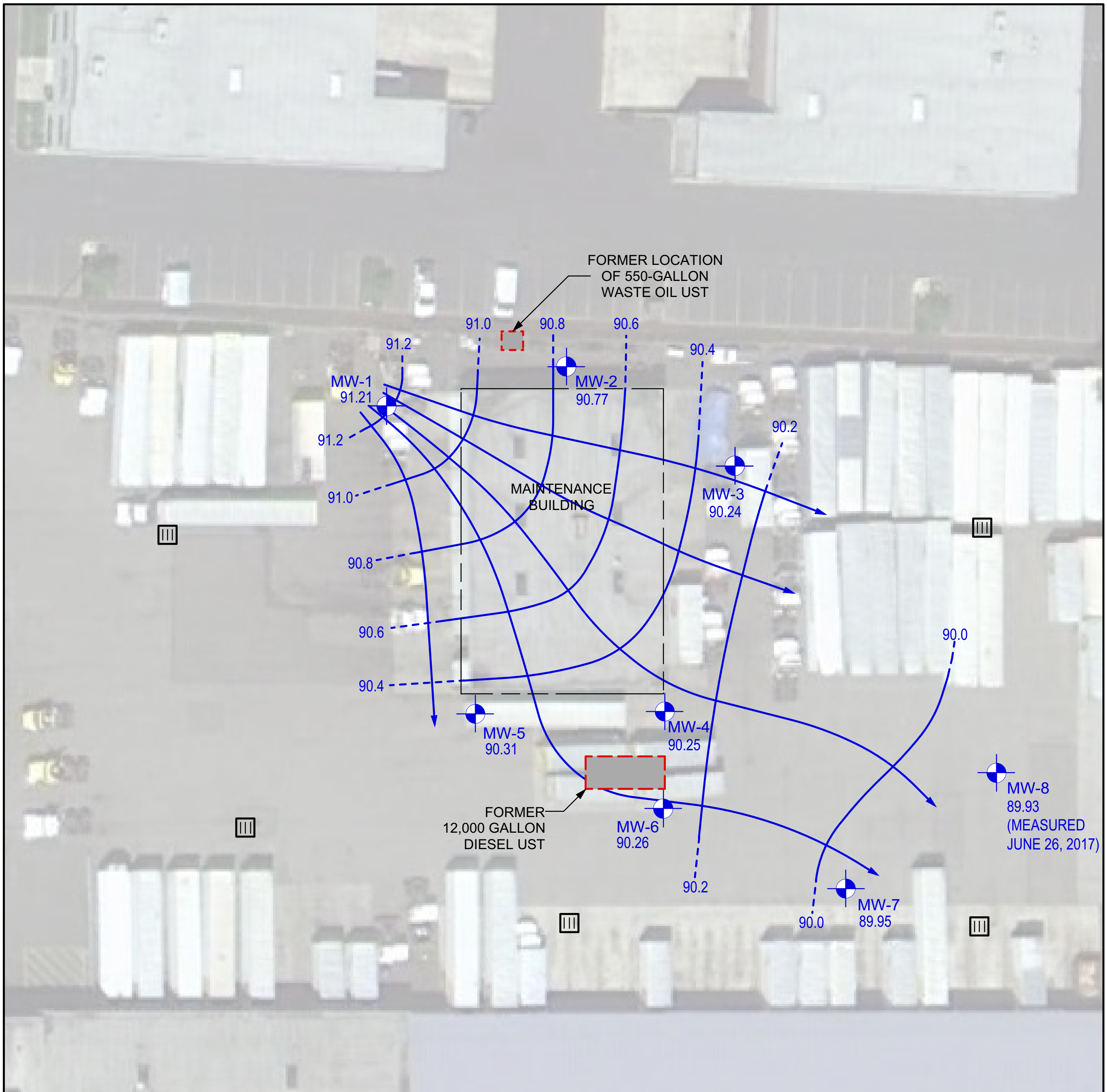


FIGURE 2

AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2017 GROUNDWATER SAMPLING REPORT TWENTY-THIRD ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 6/27/17	***DRAWN BY*** VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1



NOTES:

MW-1 91.21	MONITORING WELL LOCATION AND JUNE 16, 2017 WATER LEVEL ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION
90.0	GROUNDWATER ELEVATION CONTOUR IN FEET, DASHED WHERE INFERRED
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

FIGURE 3
JUNE 16, 2017 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2017 GROUNDWATER SAMPLING REPORT TWENTY-THIRD ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 6/30/17	***DRAWN BY*** VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

Attachment A
Field Notes and Forms

3/24/17 con't

1050 EPI completed GW sampling. no drum located on-site, will be returning later today w/ drum to dispose of purge H_2O.

1100 EPI off-site to take samples to lab and pickup drum.

1310 EPI on-site to drop off drum for purge H_2O. Drum placed on N side of mechanic shop.

Damaged Monuments

MW-1: All bolts stripped
MW-5: 1 thread tab broken
MW-3: Stripped
MW-4: 2 thread tabs broken
MW-6: All bolts stripped
MW-8: Monument in large pot hole. Monument being damaged by truck traffic.

1330 EPI off-site

6/16/17

0645 J. Sherrod on-site, meet w/ site staff to discuss operations

0650 Begin opening well caps, MW-8 covered w/ large volume of water.

well	DTW
MW-7	4.33'
MW-3	5.23'
MW-4	5.36'
MW-6	5.18'
MW-5	5.27'
MW-2	4.75'
MW-1	4.25'

- 0730 Complete DTW collection, calibrate YSI and begin setting up on MW-7. Please see stabilization sheets for well specific data.

- 0930 A. Morine on-site to install new sparge compressor.

6/16/17 cont.

1208 complete groundwater sampling. Clean equipment and create chain of custody for samples.

1222 measure catch basin located SW of MW-1.

Catch basin location

22' S → 43' W

No other catch basins have been located in this area.

1245 EPI off-site

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-7	Date	6/16/17
Sample ID:	MW-7	Field Team: (Initials)	JSF
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	0743
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0747	0.1	6.39	0.65	3.22	14.2	-21.8	—	clear
0750	0.3	6.31	0.64	0.90	14.3	-49.9	—	clear
0753	0.5	6.32	0.64	0.49	14.2	-62.4	—	clear
0756	0.7	6.33	0.64	0.41	14.2	-66.1	—	clear
0759	0.9	6.34	0.63	0.34	14.3	-70.1	—	clear
0802	1.1	6.34	0.63	0.31	14.3	-71.9	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO+ORO	0803			

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West

Project Number: 61901

Well ID:	MW-3	Date	6/16/17
Sample ID:	MW-3	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	0816
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0819	0.1	6.36	0.75	4.54	14.9	-27.4	—	clear
0822	0.3	6.33	0.73	0.71	14.8	-39.8	—	clear
0825	0.5	6.34	0.73	0.50	14.8	-46.8	—	clear
0828	0.7	6.34	0.70	0.42	14.7	-52.8	—	clear
0831	0.9	6.34	0.68	0.34	14.7	-56.2	—	clear
0834	1.1	6.34	0.66	0.29	14.7	-59.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0835	1/2 L Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-4	Date	6/16/17
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other:

Start Time	0843
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0846	0.1	6.34	0.66	1.66	13.7	-39.4	—	clear
0849	0.3	6.31	0.65	0.37	13.5	-46.1	—	clear
0852	0.5	6.31	0.65	0.32	13.5	-50.4	—	clear
0855	0.7	6.31	0.64	0.29	13.5	-53.9	—	clear
0858	0.9	6.31	0.637	0.26	13.5	-57.4	—	clear
~~0801~~ 0901	1.1	6.32	0.630	0.24	13.5	-59.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0902	1/2 L Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-6	Date	6/16/17
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: :

Start Time	0908
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0911	0.1	6.47	0.549	1.27	15.9	-48.1	—	clear
0914	0.3	6.47	0.539	0.44	15.7	-58.3	—	clear
0917	0.5	6.47	0.532	0.35	15.6	-65.9	—	clear
0920	0.7	6.47	0.528	0.32	15.6	-69.5	—	clear
0923	0.9	6.47	0.525	0.27	15.5	-74.5	—	clear
0926	1.1	6.48	0.520	0.24	15.5	-77.1	—	clear
0929	1.3	6.48	0.517	0.23	15.5	-78.9	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0930	1/2L Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Monument damaged

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: ~~WA~~ T Estes West
Project Number: 61901

Well ID:	MW-5	Date	6/16/17
Sample ID:	MW-5	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1002
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1005	0.2	6.36	0.515	2.19	14.1	-7.9	—	clear
1008	0.4	6.29	0.505	0.74	14.0	-23.5	—	clear
1011	0.6	6.29	0.496	0.42	13.9	-31.5	—	clear
1014	0.8	6.29	0.486	0.33	14.0	-38.8	—	clear
1017	1.0	6.30	0.483	0.31	14.0	-41.5	—	clear
1020	1.2	6.30	0.481	0.30	13.9	-43.2	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1021	1/2 L Amb	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes west
Project Number: 61901

Well ID:	MW-1	Date	6/16/17
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____

Start Time	1035
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1039	0.1	6.24	0.165	2.92	17.2	6.6	—	clear
1042	0.3	6.14	0.158	1.58	17.1	25.9	—	clear
1045	0.5	6.06	0.158	1.05	17.3	40.9	—	clear
1048	0.7	6.05	0.157	0.99	17.4	48.0	—	clear
1051	0.9	6.04	0.155	0.96	17.4	58.2	—	clear
1054	1.1	6.03	0.154	0.95	17.4	62.5	—	clear
1057	1.3	6.03	0.153	0.93	17.4	68.2	—	clear
1100	1.5	6.02	0.152	0.91	17.3	73.2	—	clear
1103	1.7	6.02	0.151	.93	17.4	76.0	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1104	½ L Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-2	Date	6/16/17
Sample ID:	MW-2	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______

Start Time	1114
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1118	0.2	6.03	0.193	0.51	13.8	84.4	—	clear
1121	0.4	6.02	0.192	0.36	14.0	92.7	—	clear
1124	0.6	6.02	0.187	0.47	14.1	95.2	—	clear
1127	0.8	6.02	0.181	0.39	14.3	97.9	—	clear
1130	1.0	6.01	0.169	0.40	14.5	100.1	—	clear
1133	1.2	6.00	0.166	0.45	14.6	101.9	—	clear
1136	1.4	6.00	0.161	0.51	14.6	103.1	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO	1137	1/2 L Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West, Auburn
Project Number: 61901

Well ID:	MW-8	Date	6/26/17
Sample ID:	MW-8	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ____

Start Time	0650
End Time	0710
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0652	0.1	6.29	0.92	3.14	16.1	26.3	—	clear
0655	0.3	6.25	0.92	0.68	16.2	-22.6	—	clear
0658	0.5	6.26	0.92	0.43	16.3	-40.9	—	clear
0701	0.7	6.27	0.92	0.36	16.4	-46.2	—	clear
0704	0.9	6.28	0.92	0.31	16.4	-51.1	—	clear
0707	1.1	6.28	0.93	0.28	16.4	-54.4	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0708	1/2 L Amb	none	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

Attachment B
Analytical Laboratory Report

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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June 23, 2017

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 706290

Dear Mr Kunkel:

Included are the results from the testing of material submitted on June 19, 2017 from the 61901, F&BI 706290 project. There are 4 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
c: Cynthia Moon
EPI0623R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 19, 2017 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 706290 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
706290 -01	MW-7
706290 -02	MW-3
706290 -03	MW-4
706290 -04	MW-6
706290 -05	MW-5
706290 -06	MW-1
706290 -07	MW-2

All quality control requirements were acceptable.

Date of Report: 06/23/17
Date Received: 06/19/17
Project: 61901, F&BI 706290
Date Extracted: 06/20/17
Date Analyzed: 06/20/17

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 41-152)
MW-7 706290-01	100 x	<250	108
MW-3 706290-02	310 x	<250	108
MW-4 706290-03	110 x	<250	111
MW-6 706290-04	970 x	280 x	115
MW-5 706290-05	55 x	<250	118
MW-1 706290-06	310 x	560 x	109
MW-2 706290-07	61 x	<250	119
Method Blank 07-1311 MB2	<50	<250	99

Date of Report: 06/23/17
Date Received: 06/19/17
Project: 61901, F&BI 706290

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	100	63-142	3

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.

706290

SAMPLE CHAIN OF CUSTODY

ME 06/19/17

B03

Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98027

Phone 425-395-0010 Email dougk@epi-wa.com

SAMPLERS (signature)

PROJECT NAME 61901

PO #

REMARKS

INVOICE TO

Page # 1 of 1

TURNAROUND TIME
- ☒ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel (Dx + oil)	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
MW-7	01	6/16/17	0803	water	1		X										
MW-3	02	↓	0835	↓	↓		X										
MW-4	03	↓	0902	↓	↓		X										
MW-6	04	↓	0930	↓	↓		X										
MW-5	05	↓	1021	↓	↓		X										
MW-1	06	↓	1104	↓	↓		X										
MW-2	07	↓	1137	↓	↓		X										

Samples received at 2 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Joe Sherrod	EPI	6/19/17	0630
Received by: [signature]	Michael Erdahl	F&B inc	6/19/17	0630
Relinquished by:				
Received by:				

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

June 30, 2017

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901, F&BI 706421

Dear Mr Kunkel:

Included are the results from the testing of material submitted on June 27, 2017 from the 61901, F&BI 706421 project. There are 6 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
c: Cynthia Moon
EPI0630R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 27, 2017 by Friedman & Bruya, Inc. from the Environmental Partners 61901, F&BI 706421 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
706421 -01	MW-8
706421 -02	AI-6R:Drum

All quality control requirements were acceptable.

Date of Report: 06/30/17
Date Received: 06/27/17
Project: 61901, F&BI 706421
Date Extracted: 06/27/17
Date Analyzed: 06/27/17

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)
AI-6R:Drum 706421-02	<50	<250	102
Method Blank 07-1376 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/30/17
Date Received: 06/27/17
Project: 61901, F&BI 706421
Date Extracted: 06/27/17
Date Analyzed: 06/27/17

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 47-140)
MW-8 706421-01	180 x	<250	100
Method Blank 07-1368 MB2	<50	<250	97

Date of Report: 06/30/17
Date Received: 06/27/17
Project: 61901, F&BI 706421

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

Laboratory Code: 706357-19 (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	393	95	92	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	99	79-144

Date of Report: 06/30/17
Date Received: 06/27/17
Project: 61901, F&BI 706421

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	89	93	61-133	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

706421

SAMPLE CHAIN OF CUSTODY ME 06/27/17 B02

Send Report To Doug Kunkel

Company Environmental Partners, Inc

Address 1180 NW Maple St Suite 310

City, State, ZIP Issaquah, WA 98027

Phone # (425) 395-0010 Fax # (425) 395-0011

SAMPLERS (signature)

Page # 1 of 1

PROJECT NAME/NO.	PO#
61901	

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	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	DRO + ORO						Notes
MW-8	01	6/26/17	0708	Water	1							X						
AI-6R: Drum	02 AB	↓	1430	Soil	2							X						

Samples received at 3 °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:	Joe Shamel	EPI	6/27/17	0630
Received by:	Michael Erdahl	F&B Inc	↓	↓
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

SAMPLE CHAIN OF CUSTODY

Report To Doug Kunkel

Company EPI

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98027

Phone 425 395-[illegible] Email [illegible]

SAMPLERS (*signature*)

PROJECT NAME	PO #
61901	
REMARKS	**INVOICE TO**

Page # 1 of 1

TURNAROUND TIME
- ☒ Standard Turnaround
- ☐ RUSH______
- Rush charges authorized by:

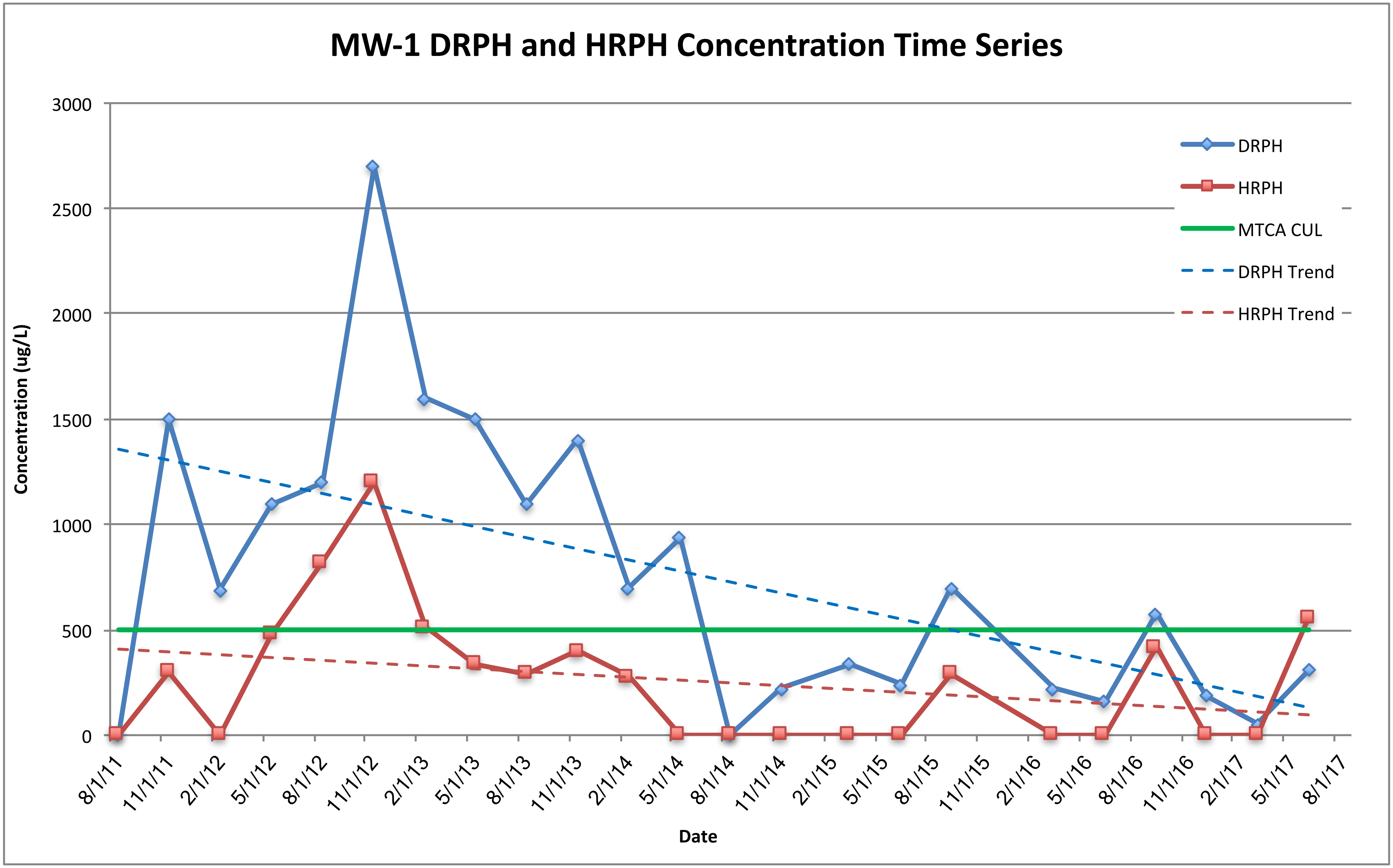
SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other______

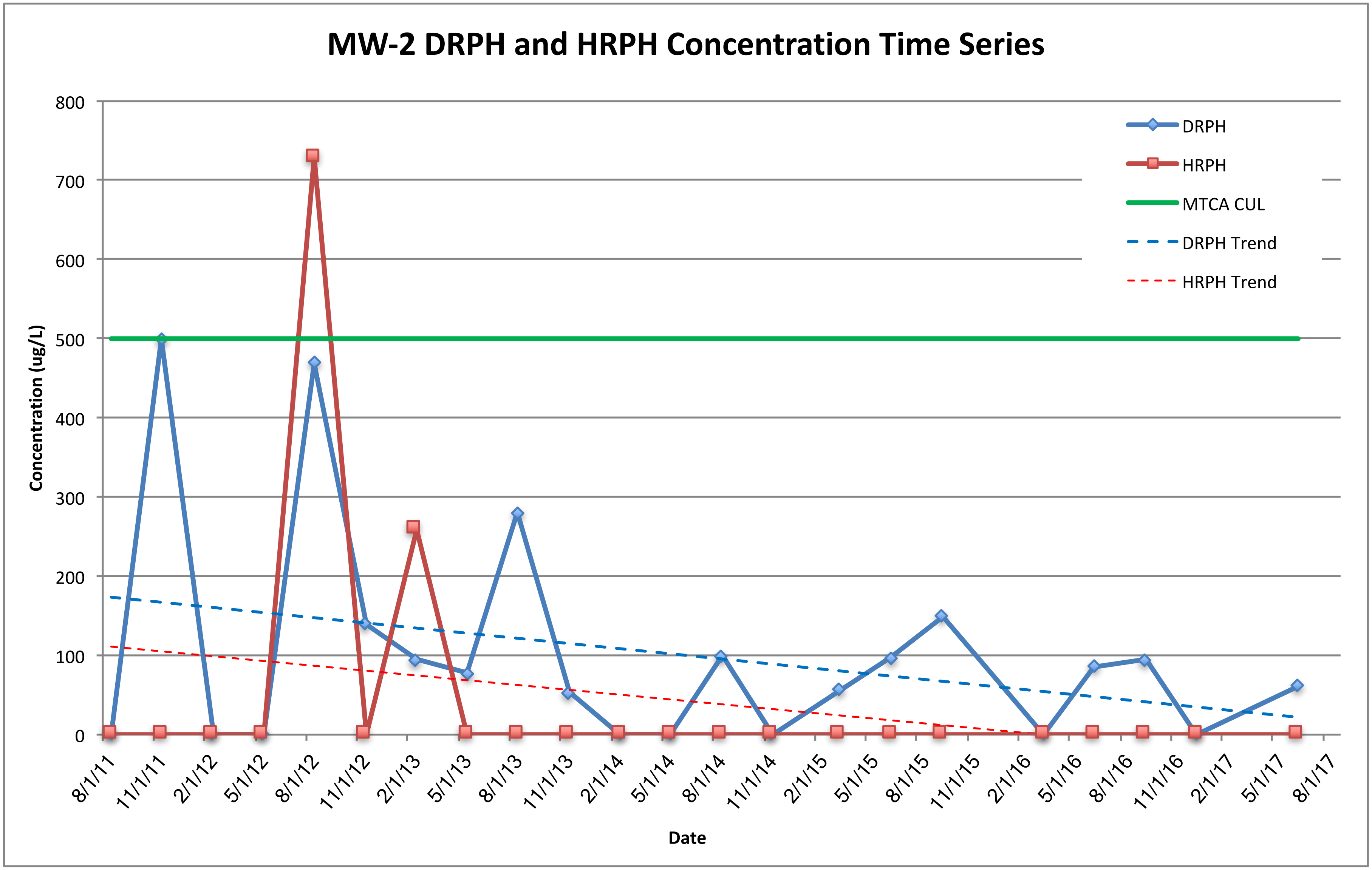
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel (Dx + oil)	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
MW-7		6/16/17	0803	water	1		X										
MW-3			0835				X										
MW-4			0902				X										
MW-6			0930				X										
MW-5			1021				X										
MW-1			1104				X										
MW-2			1137				X										

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

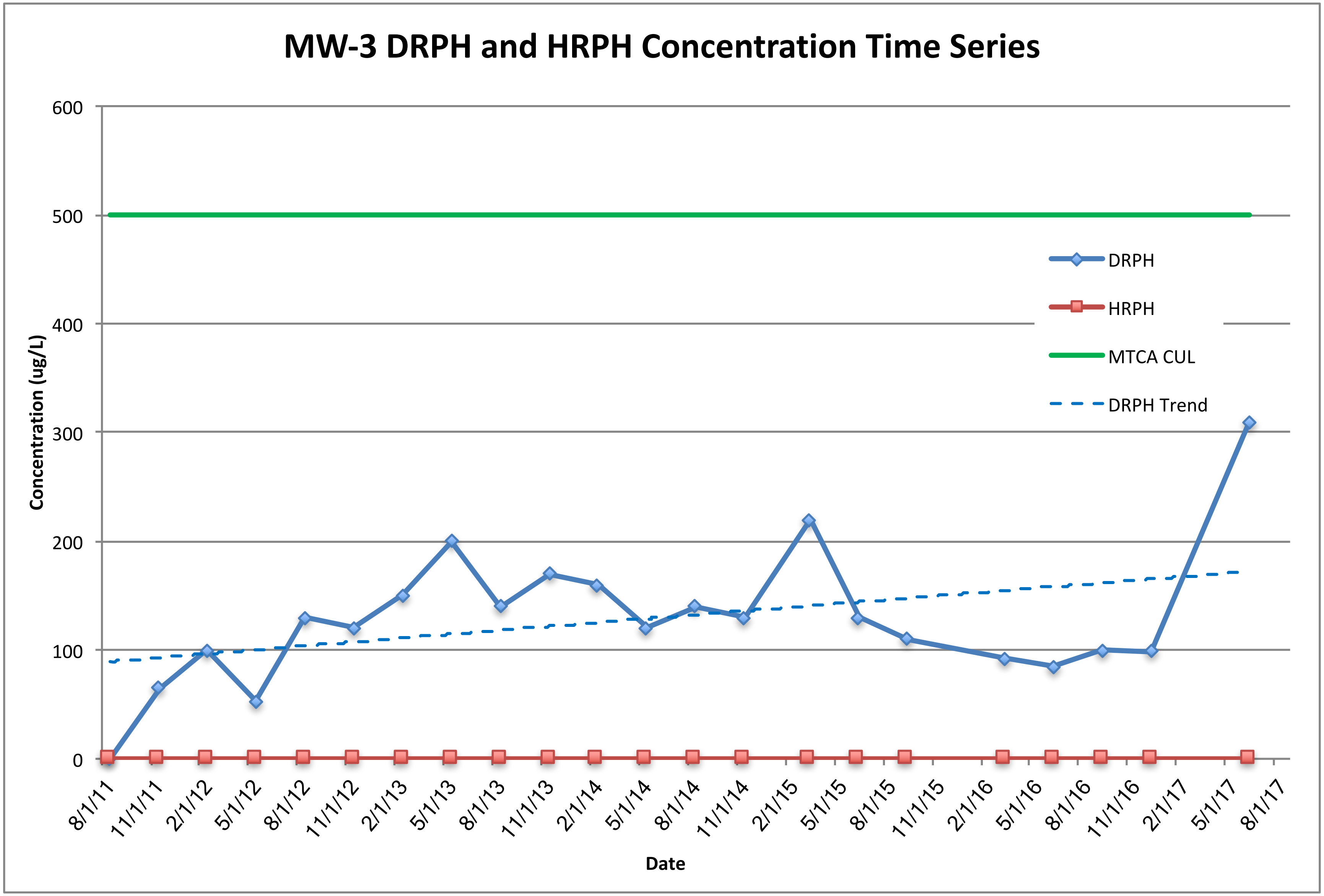
	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Joe Sherrard	EPI	6/19/17	0630
Received by:		Michael Erdahl	F&B Inc	6/19/17	0630
Relinquished by:					
Received by:					

Attachment C
Time Series Plots

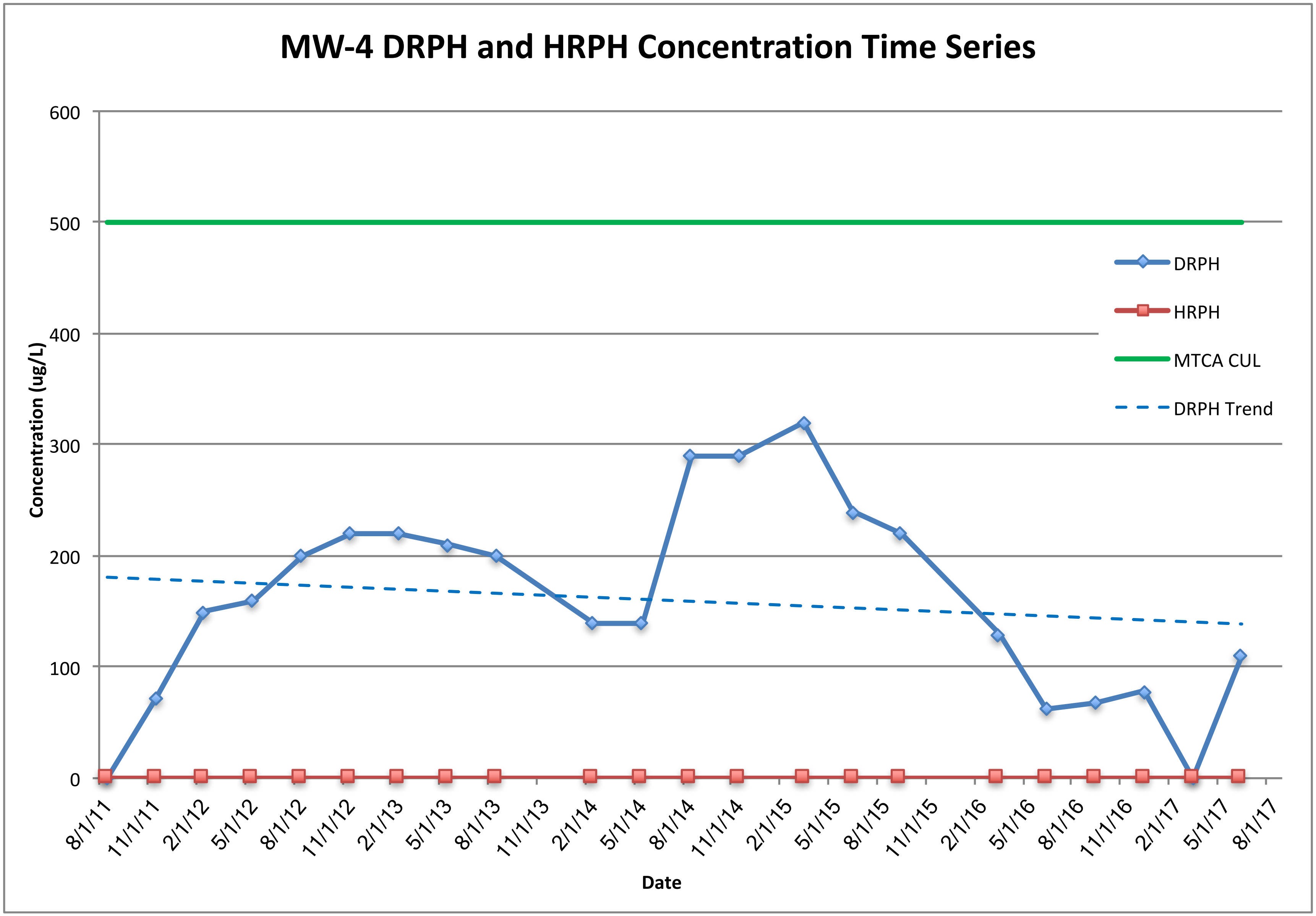

MW-1 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
3000
2500
2000
1500
1000
500
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend



MW-2 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
800
700
600
500
400
300
200
100
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend



MW-3 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
DRPH
HRPH
MTCA CUL
DRPH Trend
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date



MW-4 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
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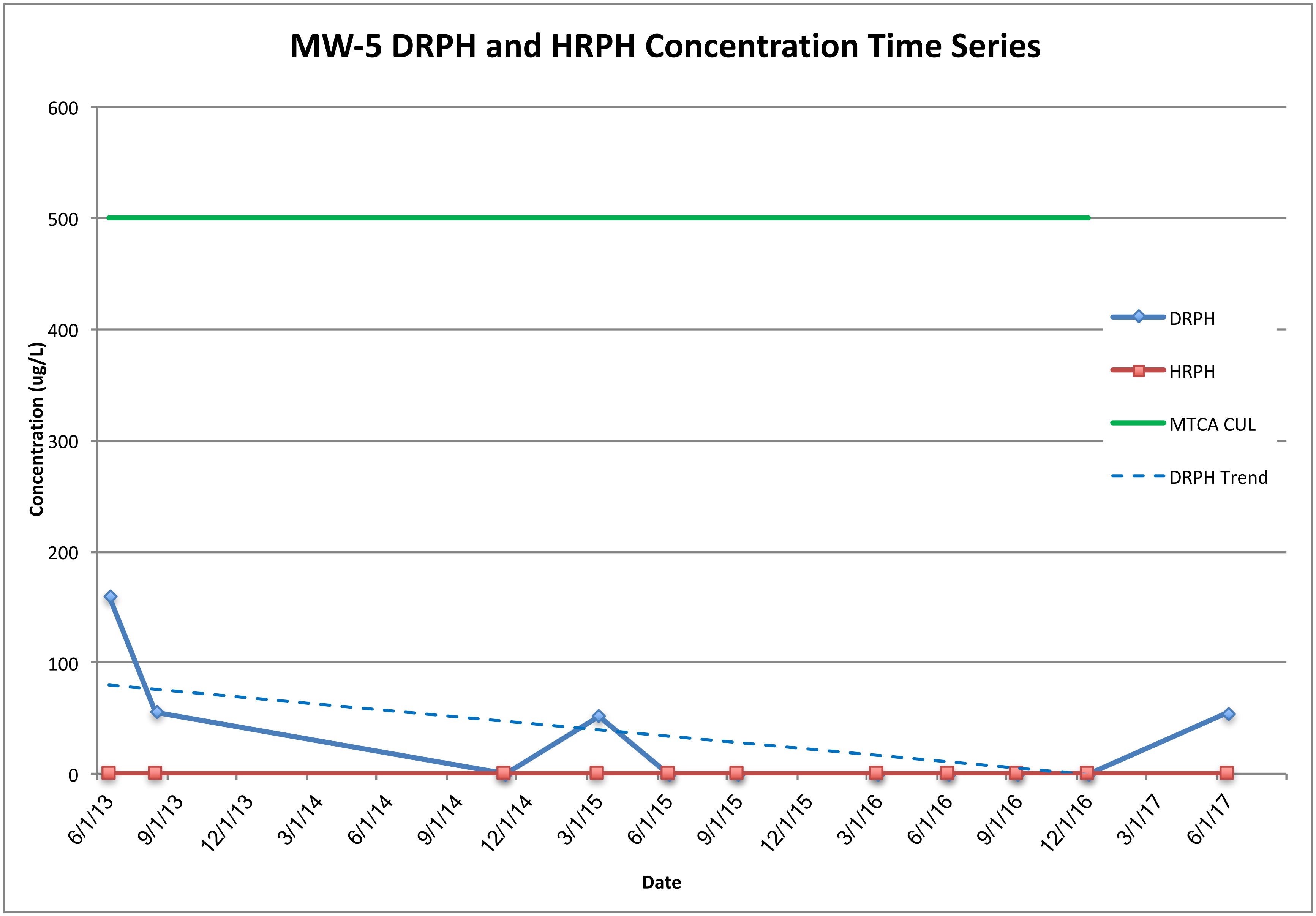
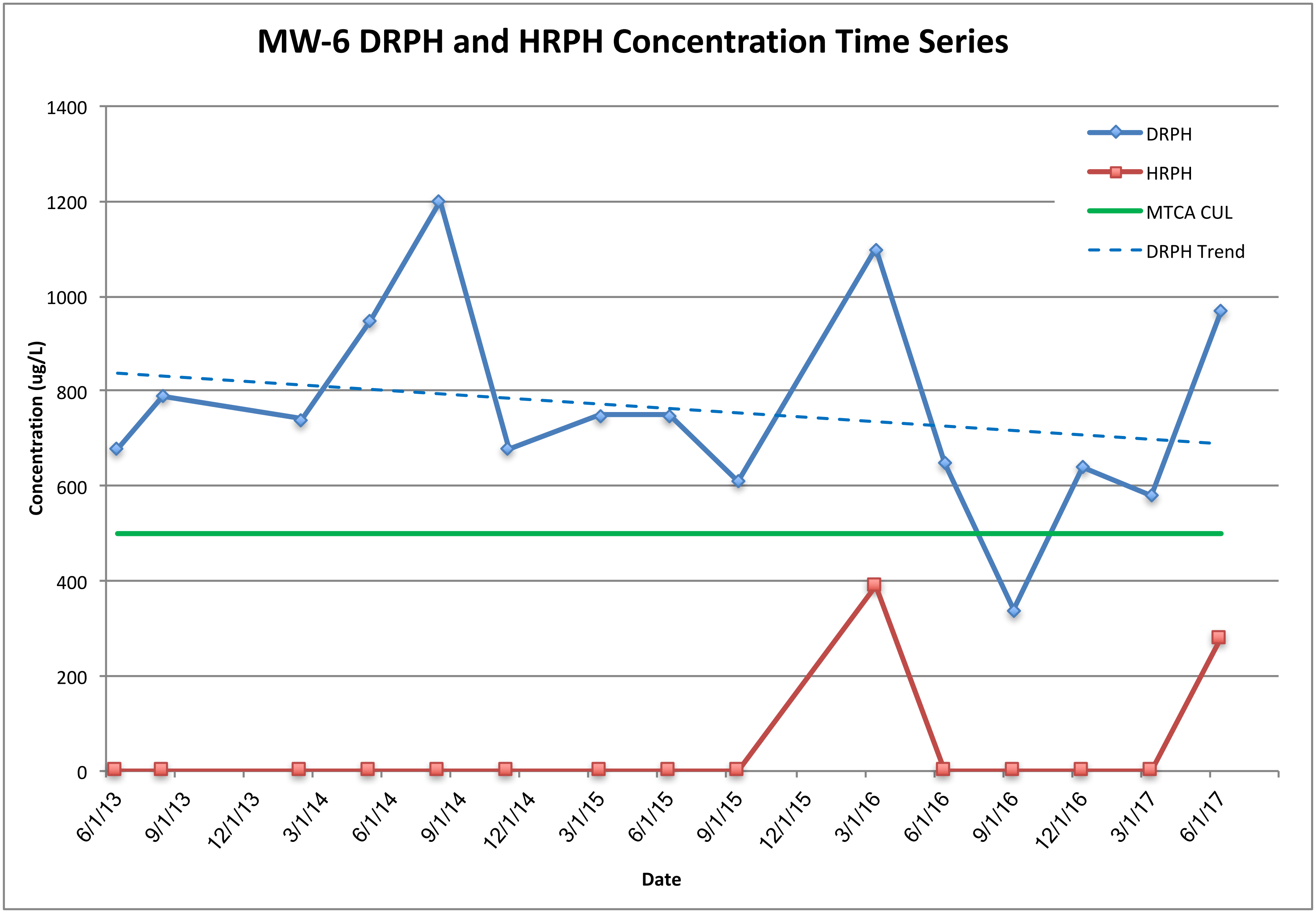
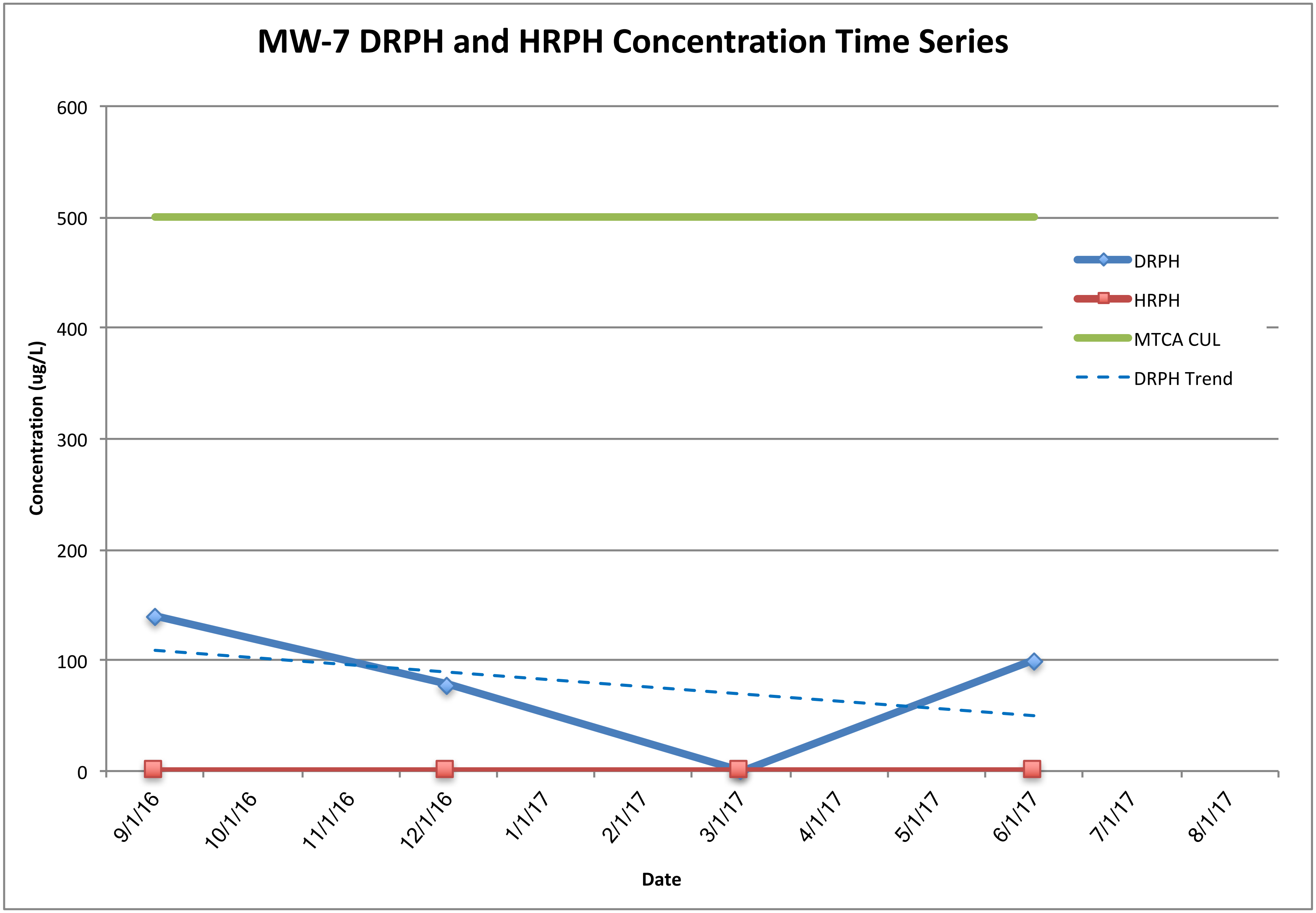
11/1/16
2/1/17
5/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend

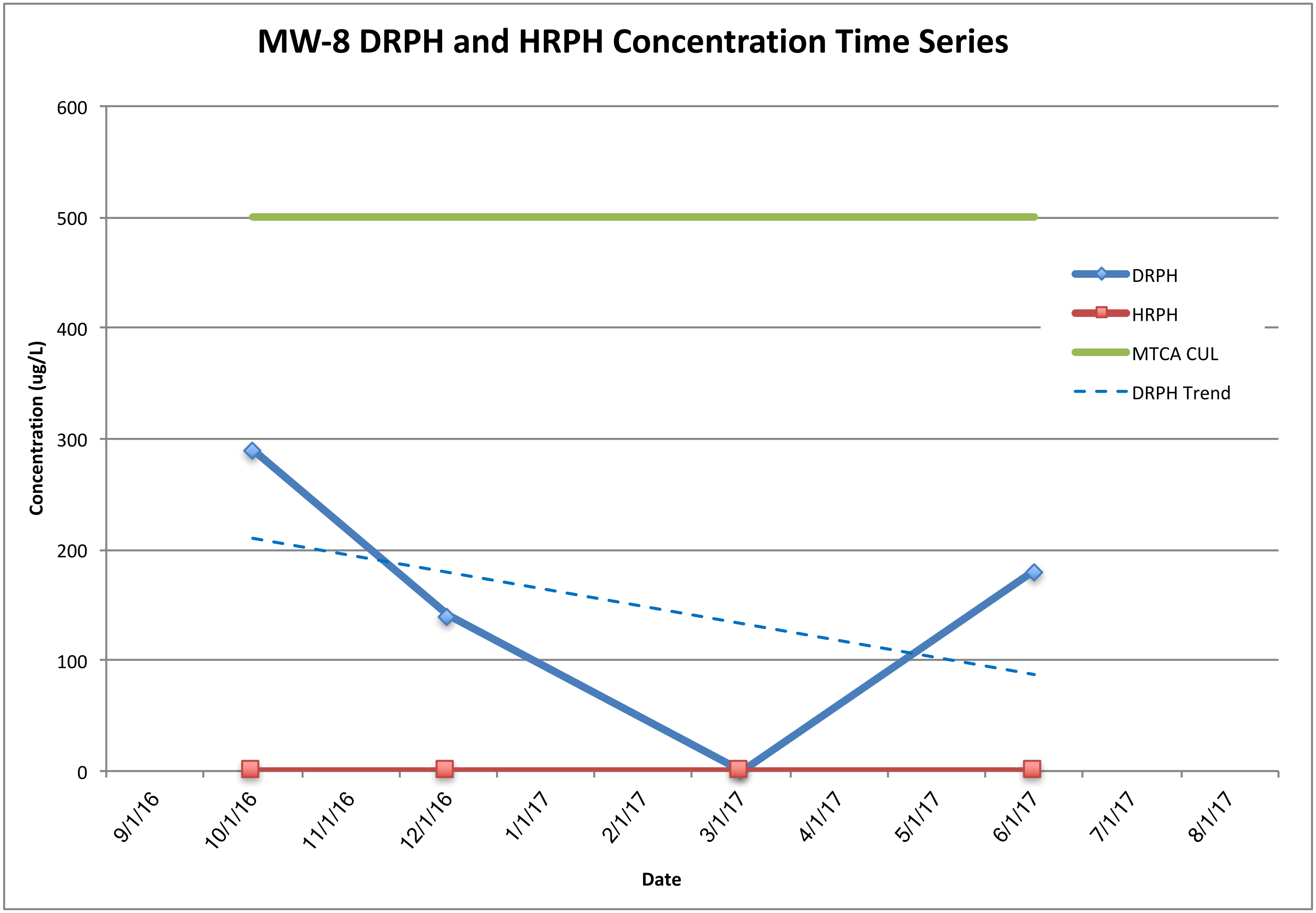


MW-5 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
6/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend


MW-6 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
1400
1200
1000
800
600
400
200
0
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
6/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend



MW-7 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
DRPH
HRPH
MTCA CUL
DRPH Trend
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
4/1/17
5/1/17
6/1/17
7/1/17
8/1/17
Date


MW-8 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
4/1/17
5/1/17
6/1/17
7/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend

ENVIRONMENTAL PARTNERS INC
1180 NW Maple Street, Suite 310 Issaquah, Washington 98027 ph 425.395.0010 fax 425.395.0011

October 3, 2017

Mr. David Pollart
P.O. Box 1096
Mercer Island, WA 98040-1096

Re: September 2017 Groundwater Sampling Report – Twenty-Fourth Round
Estes West Express Trucking Facility
2102 West Valley Highway North
Auburn, Washington
VCP No. NW 2532

EPI Project No. 61901.1

Dear Mr. Pollart:

Environmental Partners, Inc. (EPI) is pleased to present this *September 2017 Groundwater Sampling Report – Twenty-Fourth Round* for the Estes West Express Trucking Facility located at 2102 West Valley Highway North in Auburn, Washington (the Site). The general location of the Site is shown on Figure 1.

EPI understands that the Site owner is seeking a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The objective of the groundwater sampling is to monitor groundwater geochemical conditions and petroleum hydrocarbon concentrations in samples from the on-site monitoring wells to track and document groundwater remediation system progress toward achieving a full NFA determination for the Site.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from a 550-gallon waste oil underground storage tank (UST) located near the northwest corner of the existing truck maintenance building. The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were installed in December 1998. The locations of the former UST and monitoring wells relative to the truck maintenance building are shown on Figure 2.

Ecology issued a conditional NFA determination for the Site in January 2000. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until "this site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year." The NFA letter also stipulated that analytical results for groundwater compliance "shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils." Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on 3 years of data demonstrating that the benzene in groundwater at concentrations greater than MTCA Method A CULs was confined to samples from the area on the north side of the maintenance building around MW-2. At that time, the sample from MW-2 had a gasoline-range petroleum hydrocarbon (GRPH) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The GRPH concentration was less than its MTCA Method A CUL of 800 µg/L; however, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, diesel-range petroleum hydrocarbons (DRPH), or higher-range petroleum hydrocarbons (HRPH) were detected in the sample from MW-2 and none of the samples from the other monitoring wells had concentrations exceeding MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination due to the benzene concentration exceeding its MTCA Method A CUL in samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's Voluntary Cleanup Program (VCP) due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-site wells under the VCP resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples from well MW-2 remained greater than the MTCA Method A CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012, a 12,000-gallon diesel fuel UST was removed from south side of the truck maintenance building. The location of the former 12,000-gallon diesel UST is shown in Figure 2. According to available information, the UST was pumped and taken out of service in 1998 when the 550-gallon waste oil UST was removed. The 12,000-gallon diesel UST was reportedly not used between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine soil samples and one sample of water at the bottom of the UST excavation. The water sample from the bottom of the excavation was rinse water containing diesel that spilled from the UST as it was removed from the excavation due to improper rigging and hoisting of the UST. EPI prepared the *Underground Storage Tank Site Assessment Report,* dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division. The reviewer is referred to EPI's Phase II ESA report, dated December 9, 2013, for additional details regarding the Phase II ESA activities and soil and groundwater sampling results.

In 2013 Ecology requested installation of two additional wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building, near the onsite oil water separator, to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based very high petroleum hydrocarbon concentrations in a water sample from the bottom of the UST excavation. This water sample was collected immediately after the UST slipped from its rigging during removal, broke, and spilled rinse water into the excavation during decommissioning activities.

In October 2013 EPI performed a Phase II ESA of the Site at Ecology's request. The Phase II ESA included drilling and sampling nine direct push probe borings; five locations around MW-1 and four locations downgradient of MW-6. Sample results indicated that soil impacts around MW-1 were limited to location DP-3, which is immediately adjacent to the exterior wall of the NW corner of the Truck Maintenance Building. This result was anticipated because a small quantity of impacted soil was left in place immediately under the Truck Maintenance Building to maintain geotechnical stability during impacted soil excavation. None of the remaining soil samples had detections for petroleum hydrocarbons. The reviewer is referred to that report for additional details regarding the UST decommissioning activities and soil and groundwater sampling results.

On August 26, 2016, EPI oversaw the drilling and sampling of two soil borings, designated BH-1 and BH-2; and the installation of two conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. BH-1 and BH-2 were drilled east of the former diesel UST to evaluate subsurface conditions immediately downgradient of the former UST. POC well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel UST and existing well MW-6. POC well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel UST and existing well MW-6. The purpose of the POC monitoring wells is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST, which is a source area for diesel impacts to groundwater at the Site. Figure 2 shows the locations of borings and monitoring wells relative to Site features.

Monitoring well MW-9 was installed by Holt Services on August 11, 2017 at a location near the northwest corner of the truck maintenance building as shown on Figure 2. This additional well was requested by Estes West as part of their environmental due diligence for a potential purchase of the property. Historical direct push probe data from this location indicated elevated concentrations of diesel range petroleum hydrocarbons (DRPH) and heavier range petroleum hydrocarbons (HRPH) in groundwater. Additional information regarding well MW-9, including the bore log and well development data, are provided in Attachment A.

REMEDIATION SYSTEM INSTALLATION AND OPERATION

Despite successful source removal of impacted soil in 1998, analytical data for groundwater samples from the Site indicate that MW-1 had the greatest and most consistently detected concentrations of DRPH and HRPH. The data indicate that natural attenuation of the residual DRPH and HRPH impacts was not occurring at a rate that would result in a reasonable restoration timeframe; therefore, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following paragraphs.

In May 2014 EPI installed three shallow air injection wells at locations upgradient of MW-1 as shown in Figure 2. The purpose of the air injection wells and compressor system is to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater due to system operation stimulates population growth and increases the activity of aerobic bacteria and provides the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater.

Each of the shallow air injection wells is equipped with a 1-ft. length Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14 to 15-ft bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed in 8-inch diameter flush completion steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter PVC piping installed below the ground surface through the side of each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding pavement grade.

The remediation system was started and tested on May 15, 2014 after the 12th round of quarterly sampling was completed. An electrical issue with the compressor motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 (13th round) sampling event indicated that DRPH and HRPH concentrations were non-detect in the sample from MW-1. Based on the favorable result the remediation system remained temporarily off at MW-1 from August 2014 to April 2015 so that follow-on groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below MTCA Method A Groundwater CULs and to provide data intended to demonstrate that contaminant concentration rebound was not occurring.

The positive response to operation of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015 EPI installed three additional shallow air injection wells at locations upgradient of MW-6 at the locations shown in Figure 2. The three wells are constructed like the air injection wells at MW-1 and are equipped with 1-ft. lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and fully submerged in groundwater at approximately 14- to 15-ft bgs.

The expanded air injection remediation system at MW-6 was first turned on and tested on April 3, 2015. The expanded system at MW-6 ran from April 3, 2015 until June 2015 when an electrical issue with the compressor motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not running during the June 21, 2016 groundwater sampling event and inspection revealed that the compressor motor was damaged beyond repair due to overheating. Upon questioning onsite workers, EPI was informed that the system had been off for several weeks prior to the sampling event. EPI has instructed the onsite workers to immediately inform EPI or the property owner in the event of a system shut down in the future should one occur.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause is low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. This is significantly lower than the standard of 220-230 volts. Although the compressor motor was rated to operate down to 208 volts it is likely that during certain times of the day in the industrial area at and near the site, voltage fluctuations below 208 volts caused high amperage of the motor, resulting in excessive heat that eventually seized the motor.

In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt-specific motor. The compressor was started up on November 16th, 2016 and flows to the air injection wells were established. The system was running before and after the December 20, 2016 groundwater sampling event. Sometime between the December 20, 2016 sampling event and a site visit by EPI personnel on March 20, 2017, the air injection system shut down. On March 20, 2017, EPI personnel inspected the compressor and determined that the vanes were destroyed and must be replaced. The compressor repair work was completed under warranty at the manufacturer's facility.

The repaired compressor was reconnected and returned to service on June 19, 2017. Both areas of the air injection system MW-1 and MW-6, were back in operation following the completion of groundwater sampling on June 19, 2017.

Since installation in 2015, air injection well AI-6, located near monitoring well MW-6, consistently had little to no air flow. EPI tested, evaluated, and attempted to increase air flow through this point with no measurable improvement and determined that the well was plugged and unrepairable. On June 26, 2017 Holocene Drilling, under EPI direction, decommissioned AI-6 per Ecology requirements and replaced it with air injection well AI-6R. Additional information regarding replacement air injection well AI-6R are provided in Attachment A.

GROUNDWATER SAMPLING PROCEDURES

During the September 5, 2017 sampling event groundwater sampling event samples were collected from all onsite wells, MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, and new well MW-9. Analytical tests for the quarterly monitoring events were previously reduced to DRPH and HRPH. GRPH and BTEX compounds were not detected in samples from any well during the first nine quarterly monitoring events and GRPH and BTEX analyses were discontinued after the August 2013 sampling event per Ecology's approval.

Prior to sampling EPI opened all onsite wells and allowed water levels to equilibrate then measured the depth to water and total depths using an electronic water level meter. To ensure reproducibility and consistency of the depth to water data, all measurements were made to the north side of the top surface of the PVC well casing. As noted in the section below, well measuring point elevations were surveyed to the North American Vertical Datum 1988 (NAVD88). Groundwater elevations ranged from 54.39 to 54.63 feet NAVD88 in wells MW-8 and MW-5, respectively.

Groundwater elevation contours indicate that groundwater flow was generally from northwest to southeast at the time of the sampling event as shown in Figure 3. These groundwater contours and flow directions are generally consistent with historical data. Groundwater levels were potentially affected by the air injection system operation during this monitoring event because the system had been operating continuously for several months prior to the September 2017 sampling event.

Prior to sampling, EPI purged the monitoring wells using a peristaltic sampling pump and following low flow, low impact well purging techniques. Purge water was tested for stabilization of the key field parameters; temperature, pH, specific conductance, DO, and oxidation-reduction potential (ORP) approximately every three to five minutes. Samples were collected into appropriate pre-labeled containers upon attainment of field parameter stabilization criteria. Field parameter measurements for stabilized parameters are presented in Table 1. Field notes for this sampling event are included in Attachment B.

Purge water was transferred to a 55-gallon drum temporarily stored near the northwest corner of the maintenance building pending disposal characterization.

Groundwater samples were collected for DRPH and HRPH analyses using the Northwest Petroleum Hydrocarbons as Diesel (NWTPH-Dx extended to include oil-range hydrocarbons). Immediately upon collection, filled groundwater sample containers were placed in a cooler with sufficient ice to maintain an internal temperature of 4^{o}C or less pending submittal to the analytical laboratory. The samples were transported under standard Chain-of-Custody protocols to Friedman & Bruya, Inc. in Seattle, Washington. The Chain-of-Custody form is included in Attachment C.

WELL SURVEYING

Monitoring well locations and elevations were surveyed by Pace Engineers on September 19, 2017. The measuring points and groundwater elevations provided in this report are relative to the North American Vertical Datum of 1988 (NAVD 88) rather than a property-specific datum that was used for previous reports. Horizontal coordinates for the surveyed wells and other onsite features (i.e., air injection wells, boreholes BH-1 and BH-2, and catch basins near the Site) are relative to the North American Datum of 1983 (NAD 83), Washington State Plane, North Zone. The survey report for the property is presented in Attachment D.

FIELD MEASUREMENTS AND ANALYTICAL RESULTS

The following findings are based on our review of the field parameter measurements presented in Table 1 and the analytical data relative to MTCA Method A Groundwater CULs presented in Table 2. Laboratory data reports are presented in Attachment C.

The following observations were noted for the field parameter data presented in Table 1.

- Depth to water measurements ranged from 5.31 ft. below top of casing (TOC) in MW-8 to 6.39 ft. below TOC in MW-4. The shallow depth to water and flat hydraulic gradient are consistent with historical water level data for the Site.

- Field-measured pH values for purge water from the wells ranged from 6.29 in purge water from MW-1 to 6.72 in purge water from MW-9. These pH measurements represent approximately neutral pH conditions and are consistent with historical pH measurements at the Site.

- DO measurements range from 0.21 milligrams per liter (mg/L) in purge water from MW-3 and MW-7 to 0.61 mg/L in purge water from MW-6.

- ORP measurements ranged from -85.4 millivolts (mV) in purge water from MW-8 to +69.3 mV in purge water from MW-1. Negative ORP measurements indicate anaerobic (reducing) geochemical conditions in groundwater, while positive ORP measurements indicate more aerobic geochemical conditions. The positive ORP measurements at MW-1 and MW-2 likely result from operation of the air injection system near MW-1 and MW-2.

The following observations were noted for the analytical data presented in Table 2.

- HRPH was detected in the groundwater sample from MW-1 at a concentration of 340 μg/L during this sampling event. The 340 μg/L HRPH concentration in the sample from MW-1 is less the MTCA Method A CUL of 500 μg/L. HRPH was not detected in samples from any of the remaining wells during this sampling event.

- DRPH was detected in samples collected from all 9 monitoring wells sampled during this event at concentrations ranging from 59 μg/L in the sample from MW-7 to 4,300 μg/L in the sample from new monitoring well MW-9. Concentrations of DRPH did not exceed the MTCA Method A CUL of 500 μg/L in samples from any of the wells except for the sample from MW-9. MW-9 is intentionally installed immediately adjacent to petroleum hydrocarbon-impacted soil remaining in place beneath the supporting exterior wall of the Truck Maintenance Building. This small volume of impacted soil could not be safely excavated due to geotechnical concerns with the stability of the building.

Time series plots of analytical data for groundwater samples from the nine onsite monitoring wells are presented in Attachment E. The time series plots include trend lines matched to the data indicating DRPH and HRPH concentration trends where applicable.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are supported by data presented and evaluated in this quarterly groundwater monitoring report.

- Samples from MW-3, MW-4, MW-5, MW-7, and MW-8 have never had DRPH or HRPH concentrations greater than MTCA Method A CULs. Only one sample from MW-2, collected in August 2012, had a HRPH exceedance and HRPH has been non-detect in samples from MW-2 since February 2013.

- HRPH was detected in the groundwater sample collected at MW-1 during this sampling event at a concentration less than the MTCA Method A CUL. HRPH was not detected in samples from any of the remaining wells. Samples from MW-3, MW-4, MW-5, MW-7, and MW-8 have never had a detection for HRPH.

- Only the sample from newly-installed monitoring well MW-9 had a DRPH concertation that exceeded the MTCA Method A CUL. DRPH was detected in groundwater samples from the remaining well sampled at concentrations less than its MTCA Method A CUL.

- Historical DRPH impacts in samples from MW-1, first observed in November 2011, might have been due to short-term truck parking and outdoor storage of oily engine parts outside of the northwest corner of the truck maintenance building by the tenant. These practices were in violation of the lease agreement and were discontinued by the tenant upon direction from the property owner.

- DRPH concentrations in samples from MW-1 and MW-6, which monitor groundwater in areas undergoing active remediation, were less than the Method A Groundwater CUL during this quarterly monitoring event. DRPH concentrations in samples from MW-1 and MW-6 continue to trend downward as shown in the time-series plots in Attachment E.

EPI appreciates the opportunity to be of assistance on this project. If you have any questions or comments, please do not hesitate to contact me at (425) 395-0016.

Sincerely,

Douglas Kunkel

Douglas Kunkel, LG, LHG
Principal Hydrogeologist

State of Washington
Hydrogeologist
280
Licensed Geologist
DOUGLAS C. KUNKEL

cc: Ms. Jing Song, LG - WDOE-Northwest Regional Office

ENCLOSURES

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Table 2 Quarterly Groundwater Monitoring Analytical Results in µg/L

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Figure 2 Monitoring Well Locations and Air Injection Remediation System Layout
Figure 3 September 5, 2017 Groundwater Elevation Contours and Flow Direction

Attachments

Attachment A Well Installation Bore Logs
Attachment B Field Notes and Forms
Attachment C Analytical Laboratory Report
Attachment D Survey Report
Attachment E Time Series Plots

Tables

Table 1: Summary of Groundwater Stabilization Parameters
Estes West Express Facility
2102 West Valley Highway North, Auburn, Washington

Well ID	Date Sampled	Depth to Water (ft.)	Top of Casing Elevation (ft. NAVD88)	Groundwater Elevation (ft. NAVD88)	pH	Specific Conductance (mS/cm^2)	Dissolved Oxygen (mg/L)	Temp. (^{o}C)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-1	09/05/17	6.17	60.77	54.60	6.29	0.288	0.49	20.2	69.3	NM
MW-2	09/05/17	6.32	60.85	54.53	6.41	0.353	0.55	18.6	36.2	NM
MW-3	09/05/17	6.30	60.80	54.50	6.66	0.610	0.21	18.9	-58.9	NM
MW-4	09/05/17	6.39	60.93	54.54	6.53	0.660	0.58	17.1	-32.2	NM
MW-5	09/05/17	6.27	60.90	54.63	6.54	0.563	0.51	17.7	-44.6	NM
MW-6	09/05/17	6.23	60.76	54.53	6.60	0.556	0.61	20.0	-55.7	NM
MW-7	09/05/17	5.43	59.87	54.44	6.57	0.526	0.21	18.5	-61.6	NM
MW-8	09/05/17	5.31	59.70	54.39	6.52	1.070	0.34	20.8	-85.4	NM
MW-9	09/05/17	6.33	60.91	54.58	6.72	0.600	0.38	19.8	-77.3	NM

Notes:

NAVD88 = North American Vertical Datum, 1988

NM = Not Measured

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

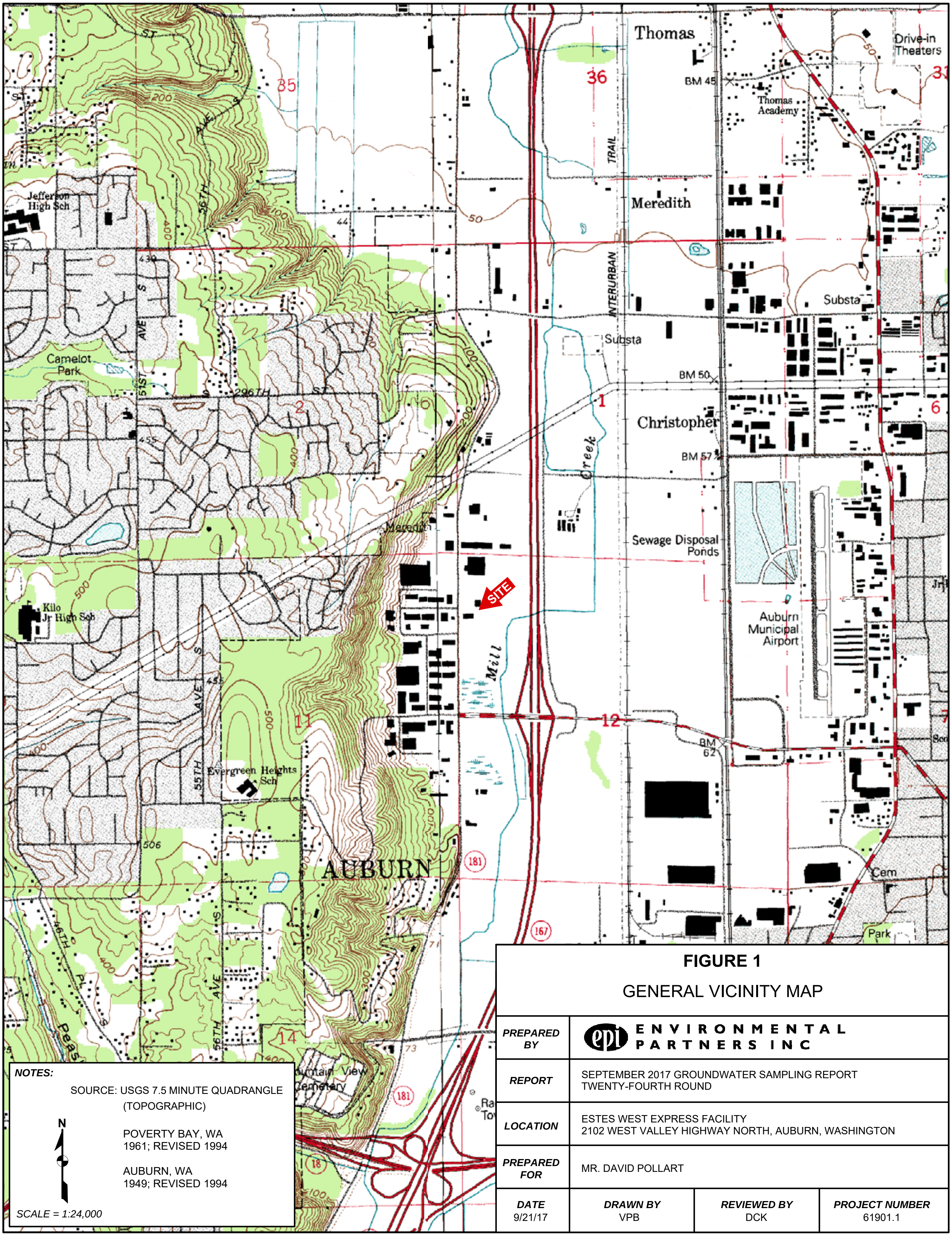
Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-1	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**1,500**	**300**	<1	<1	<1	<3
	2/10/12	**690**	<250	<1	<1	<1	<3
	5/17/12	**1,100**	**480**	<1	<1	<1	<3
	8/28/12	**1,200**	**820**	<1	<1	<1	<3
	11/15/12	**2,700**	**1,200**	<1	<1	<1	<3
	2/14/13	**1,600**	**510**	<1	<1	<1	<3
	5/16/13	**1,500**	**340**	<1	<1	<1	<3
	8/14/13	**1,100**	**290**	<1	<1	<1	<3
	11/25/13	**1,400**	**400**	NA			
	2/20/14	**700**	**280**	NA			
	5/15/14	**940**	<250	NA			
	8/14/14	<50	<250	NA			
	11/24/14	**220**	<250	NA			
	3/31/15	**340**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**700**	**290**	NA			
	3/3/16	**220**	<250	NA			
	6/21/16	**160**	<250	NA			
	9/16/16	**580**	**420**	NA			
	12/20/16	**190**	<250	NA			
	3/24/17	**53**	<250	NA			
	6/19/17	**310**	**560**	NA			
	9/5/17	**340**	**340**	NA			
MW-2	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**500**	<250	<1	<1	<1	<3
	2/10/12	<50	<250	<1	<1	<1	<3
	5/17/12	<50	<250	<1	<1	<1	<3
	8/28/12	**470**	**730**	<1	<1	<1	<3
	11/15/12	**140**	<260	<1	<1	<1	<3
	2/14/13	**94**	**260**	<1	<1	<1	<3
	5/16/13	**77**	<250	<1	<1	<1	<3
	8/14/13	**280**	<250	<1	<1	<1	<3
	11/25/13	**53**	<250	NA			
	2/20/14	<50	<250	NA			
	5/15/14	<50	<250	NA			
	8/14/14	**100**	<250	NA			
	11/24/14	<50	<250	NA			
	3/31/15	**57**	<250	NA			
	6/29/15	**97**	<250	NA			
	9/28/15	**150**	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	**86**	<250	NA			
	9/16/16	**95**	<250	NA			
	12/20/16	<50	<250	NA			
	6/19/17	**61**	<250	NA			
	9/5/17	**100**	<250	NA			
MW-3	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**65**	<250	<1	<1	<1	<3
	2/10/12	**100**	<250	<1	<1	<1	<3
	5/17/12	**53**	<250	<1	<1	<1	<3
	8/28/12	**130**	<250	<1	<1	<1	<3
	11/15/12	**120**	<280	<1	<1	<1	<3
	2/14/13	**150**	<250	<1	<1	<1	<3
	5/16/13	**200**	<250	<1	<1	<1	<3
	8/14/13	**140**	<250	<1	<1	<1	<3
	11/25/13	**170**	<250	NA			
	2/20/14	**160**	<250	NA			
	5/15/14	**120**	<250	NA			
	8/14/14	**140**	<250	NA			
	11/24/14	**130**	<250	NA			
	3/31/15	**220**	<250	NA			
	6/29/15	**130**	<250	NA			
	9/28/15	**110**	<250	NA			
	3/3/16	**92**	<250	NA			
	6/21/16	**85**	<250	NA			
	9/16/16	**100**	<250	NA			
	12/20/16	**99**	<250	NA			
	6/19/17	**310**	<250	NA			
	9/5/17	**210**	<250	NA			

Table 2: Quarterly Groundwater Monitoring Analytical Results in µg/L
Estes West Express Trucking Facility
2102 West Valley Highway North - Auburn, WA

Well ID	Date Sampled	DRPH[b]	HRPH[b]	Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]
MW-4	8/12/11	<250	<500	<1	<1	<1	<3
	11/11/11	**72**	<250	<1	<1	<1	<3
	2/10/12	**150**	<250	<1	<1	<1	<3
	5/17/12	**160**	<250	<1	<1	<1	<3
	8/28/12	**200**	<250	<1	<1	<1	<3
	11/15/12	**220**	<250	<1	<1	<1	<3
	2/14/13	**220**	<250	<1	<1	<1	<3
	5/16/13	**210**	<250	<1	<1	<1	<3
	8/14/13	**200**	<250	<1	<1	<1	<3
	2/20/14	**140**	<250	NA			
	5/15/14	**140**	<250	NA			
	8/14/14	**290**	<250	NA			
	11/24/14	**290**	<250	NA			
	3/31/15	**320**	<250	NA			
	6/29/15	**240**	<250	NA			
	9/28/15	**220**	<250	NA			
	3/3/16	**130**	<250	NA			
	6/21/16	**63**	<250	NA			
	9/29/16	**68**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
	6/19/17	**110**	<250	NA			
	9/5/17	**150**	<250	NA			
MW-5	6/5/13	**160**	<250	<1	<1	<1	<3
	8/14/13	**56**	<250	<1	<1	<1	<3
	11/24/14	<50	<250	NA			
	3/31/15	**52**	<250	NA			
	6/29/15	<50	<250	NA			
	9/28/15	<50	<250	NA			
	3/3/16	<50	<250	NA			
	6/21/16	<50	<250	NA			
	9/16/16	<50	<250	NA			
	12/20/16	<50	<250	NA			
	6/19/17	**55**	<250	NA			
	9/5/17	**68**	<250	NA			
MW-6	6/5/13	**680**	<250	<1	<1	<1	<3
	8/14/13	**790**	<250	<1	<1	<1	<3
	2/20/14	**740**	<250	NA			
	5/15/14	**950**	<250	NA			
	8/14/14	**1,200**	<250	NA			
	11/24/14	**680**	<250	NA			
	3/31/15	**750**	<250	NA			
	6/29/15	**750**	<250	NA			
	9/28/15	**610**	<250	NA			
	3/3/16	**1,100**	**390**	NA			
	6/21/16	**650**	<250	NA			
	9/16/16	**340**	<250	NA			
	12/20/16	**640**	<250	NA			
	3/24/17	**580**	<250	NA			
	6/19/17	**970**	**280**	NA			
	9/5/17	**320**	<250	NA			
MW-7	9/16/16	**140**	<250	NA			
	12/20/16	**78**	<250	NA			
	3/24/17	<50	<250	NA			
	6/19/17	**100**	<250	NA			
	9/5/17	**59**	<250	NA			
MW-8	10/3/16	**290**	<250	NA			
	12/20/16	**140**	<250	NA			
	3/24/17	<50	<250	NA			
	6/26/17	**180**	<250	NA			
	9/5/17	**160**	<250	NA			
MW-9	9/5/17	**4,300**	<250	NA			
MTCA Method A Groundwater Cleanup Level (in µg/L)		**500**	**500**	**5**	**1,000**	**700**	**1,000**

[a] Analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
[b] Analyzed for diesel (DRPH) and higher-range hydrocarbons (HRPH) using Ecology Method NWTPH-Dx
[c] Analyzed using EPA
[d] Cleanup level is 800 µg/L when benzene is present in groundwater and 1,000 µg/L when benzene is not present

Figures



NOTES:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

N

POVERTY BAY, WA
1961; REVISED 1994

AUBURN, WA
1949; REVISED 1994

SCALE = 1:24,000

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2017 GROUNDWATER SAMPLING REPORT TWENTY-FOURTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
9/21/17	VPB	DCK	61901.1

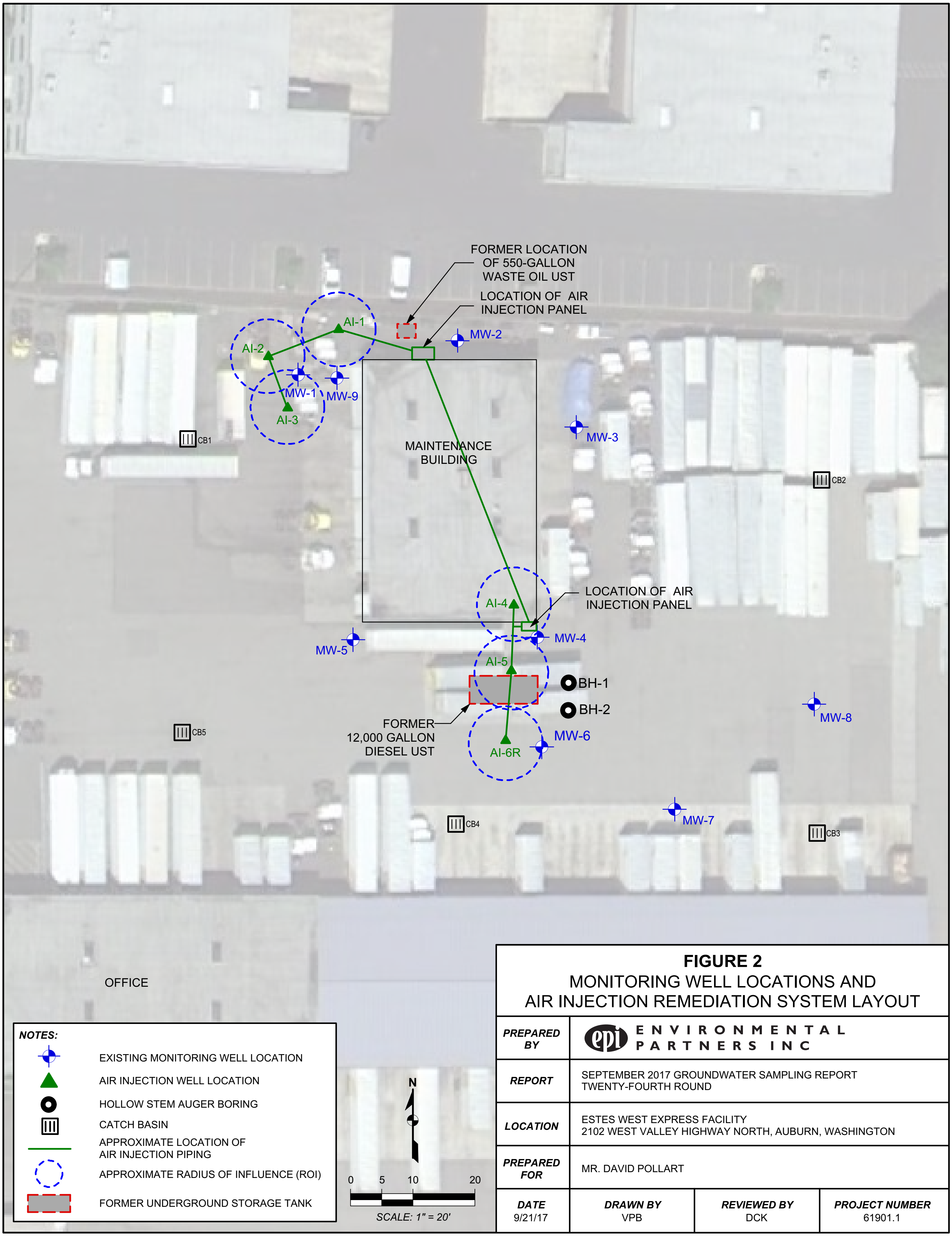


FIGURE 2
MONITORING WELL LOCATIONS AND AIR INJECTION REMEDIATION SYSTEM LAYOUT

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2017 GROUNDWATER SAMPLING REPORT TWENTY-FOURTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
9/21/17	VPB	DCK	61901.1

OFFICE

NOTES:

MW-1 54.60	MONITORING WELL LOCATION AND SEPTEMBER 5, 2017 WATER LEVEL ELEVATION IN FEET (NAVD88)
	APPROXIMATE GROUNDWATER FLOW DIRECTION
54.60	GROUNDWATER ELEVATION CONTOUR IN FEET (NAVD88), DASHED WHERE INFERRED
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

N

0 12.5 25 50

SCALE: 1" = 50'

FIGURE 3
SEPTEMBER 5, 2017 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2017 GROUNDWATER SAMPLING REPORT TWENTY-FOURTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

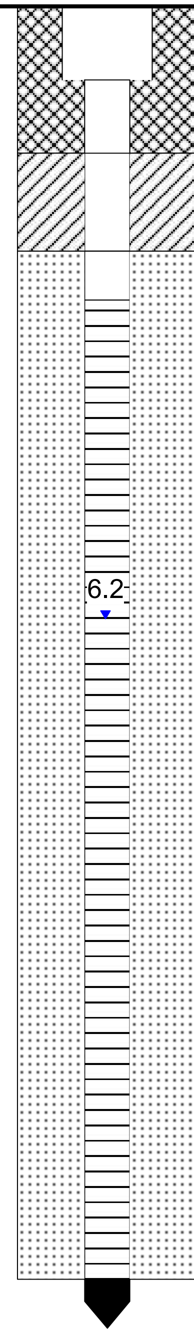
DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
9/21/17	VPB	DCK	61901.1

Attachment A
Well Installation Bore Logs

ENVIRONMENTAL PARTNERS INC	BORING ID: MW-9	
SITE ADDRESS **2012 West Valley Highway North**	CLIENT: **David Pollart**	CASING MATERIAL AND SIZE: **2" Sch 40 PVC**
DRILLING CONTRACTOR: **Holt Services**	PROJECT #: **61901**	SCREEN SIZE: **0.010**
DRILLING EQUIPMENT: **Limited Access Track Rig**	DATE: **8/11/17**	SCREEN INTERVAL: **3 - 13 ft BGS**
DRILLING METHOD: **HSA**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **Silica Sand**
LOGGED BY: **J. Sherrod** / BOREHOLE SIZE: **9 inch**	TOTAL DEPTH: **13 ft**	FILTER PACK INTERVAL: **2.5 - 13 ft BGS**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)
0		Concrete Surface				
1	GP-GM	POORLY-GRADED GRAVEL WITH SILT AND SAND; brown; damp; loose; mostly gravel with some silt and few sand				
3			30	5,5,5		0.0
4		-Moist, increasing silt content				
4.5			20	2,5,13		0.6
5.5					MW-9:5.5	446.0
6		-Moist, odor	50	10,13,15		
8	ML	SILT WITH SAND; dark brown; wet; mostly silt with few sand; no odor				
9	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; mostly sand with some silt				
9.5						7.3
13		End of Borehole				42.1
14						

Well Construction

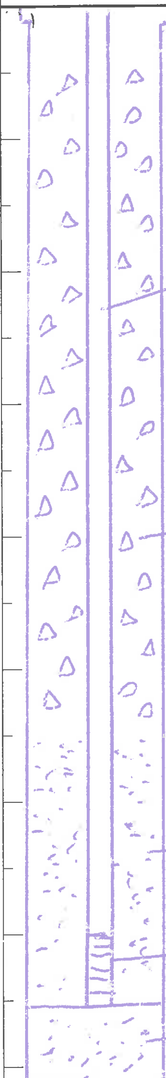


NOTES:

epi ENVIRONMENTAL PARTNERS INC

SITE ADDRESS: 2102 W Valley Hwy N Auburn WA	**BORING ID:** AI-6R	
DRILLING CONTRACTOR: Holocene Drilling	CLIENT: David Pollard	CASING MATERIAL AND SIZE: 3/4" Sch 40. PVC
DRILLING EQUIPMENT: D 50	PROJECT #: 61901	SCREEN SIZE: Kerr Foot
DRILLING METHOD: HSA	DATE: 6/26/17	SCREEN INTERVAL: 1'
LOGGED BY: J Sherrod	GROUND SURFACE ELEV. FT AMSL: NM	FILTER PACK: Silica Sand
	TOTAL DEPTH: 16'	FILTER PACK INTERVAL: ~~16'~~ 12'-16'

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	Blows per 6"	Sample	PID (ppm)	Well Construction	Comments
		0-4" Concrete						
2	GP-GM	4"-5' Poorly-Graded gravel w/ silt and sand, brown, damp, mostly gravel w/ some silt and few sand.						
4		- moist						Blank 3/4" PVC
6		5'-16' Poorly-Graded sand w/ silt, wet, dk gray, mostly sand w/ few silt.						
8								Bentonite
10								
12								Sand
14								Kerrfoot sampler
16								Sand
		End of Borehole						



NOTES: Hole drilled w/ wood plug, no samples collected.

HSA with well

Attachment B
Field Notes and Forms

9/5/17

Scope: Groundwater monitoring

Conditions: Cloudy - 70°F

0530 J. Sherrod on-site, open wells and prepare for DTW collection. System running on arrival.

Well	DTW
MW-1	6.17
MW-2	6.32
MW-3	6.30
MW-4	6.39 - Cap loose, possibly due to AS pressure
MW-5	6.27
MW-6	6.23
MW-7	5.43
MW-8	5.31
MW-9	6.33

0700 EPI off-site

~~0800~~

0900 EPI on-site, Begin sampling. Please see stabilization sheets for well specific info.

9/5/17

Air Well	Sparge Pres.	Parameters Flow
AS-1	5	1
AS-2	7	1
AS-3	7	1
AS-4	7	1
AS-5	15	1
AS-6	11	5

1500 EPI off-site

JS

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-1	Date	9/5/17
Sample ID:	MW-1	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1330
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1334	0.2	6.42	0.292	0.81	19.7	69.7	—	clear
1337	0.3	6.26	0.288	0.57	20.1	73.7	—	clear
1340	0.4	6.27	0.288	0.57	20.1	73.3	—	clear
1343	0.5	6.28	0.288	0.57	20.2	71.4	—	clear
1346	0.6	6.29	0.288	0.54	20.3	70.4	—	clear
1349	0.7	6.29	0.288	0.51	20.2	69.4	—	clear
1352	0.8	6.29	0.288	0.44	20.2	69.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1353	1/2 L amber	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-2	Date	4/5/17
Sample ID:	MW-2	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1255
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1259	0.2	6.53	0.360	1.30	18.2	15.2	—	clear
1302	0.3	6.35	0.356	5.11	17.6	29.8	—	clear
1305	0.4	6.36	0.350	0.73	17.6	30.4	—	clear
1308	0.5	6.39	0.350	0.57	17.8	31.0	—	clear
1311	0.6	6.41	0.348	0.57	18.1	32.4	—	clear
1314	0.7	6.41	0.349	0.57	18.2	34.4	—	clear
1317	0.8	6.41	0.353	0.55	18.6	36.2	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1318	1/2 Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-3	Date	9/5/17
Sample ID:	MW-3	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1031	0.1	6.97	~~0.412~~ 0.75	~~0.412~~ 2.77	19.5	-14.9	—	clean
1034	0.2	6.62	0.79	0.83	19.1	-29.8	—	clean
1037	0.3	6.64	0.78	0.74	19.2	-36.6	—	clean
1040	0.4	6.65	0.77	0.70	19.1	-43.8	—	clean
1043	0.5	6.66	0.69	0.44	19.1	-52.1	—	clean
1046	0.6	6.66	0.65	0.36	19.1	-55.1	—	clean
1049	0.7	6.66	0.61	0.21	18.9	-58.9	—	clean

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1050	1/2 Ltr Ambs	None	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-4	Date	9/5/17
Sample ID:	MW-4	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1115
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1118	0.1	6.66	0.69	3.12	17.3	12.0	—	clear
1121	0.2	6.58	0.69	1.68	17.3	4.8	—	clear
1124	0.3	6.54	0.68	0.80	17.0	-15.8	—	clear
1127	0.4	6.55	0.68	0.67	17.2	-22.4	—	clear
1130	0.5	6.55	0.67	0.60	17.1	-29.5	—	clear
1133	0.6	6.53	0.66	0.58	17.1	-32.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1134	1/2 Ltr Amb	none	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-5	Date	9/5/17
Sample ID:	MW-5	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	
(2"=0.163 x depth)	
(4"=0.653 x depth)	

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ______________

Start Time	1218
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1220	0.1	6.62	0.59	1.37	18.2	-34.7	—	clear
1223	0.2	6.53	0.58	0.63	17.8	-31.5	—	clear
1226	0.3	6.49	0.574	0.54	18.1	-34.0	—	clear
1229	0.4	6.52	0.564	0.56	17.8	-38.9	—	clear
1232	0.5	6.54	0.564	0.54	17.5	-42.4	—	clear
1235	0.6	6.54	0.563	0.51	17.7	-44.6	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
	1236			

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-6	Date	9/5/17
Sample ID:	MW-6	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1143
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1145	0.1	6.63	0.57	1.35	19.7	-20.6	—	clear
1148	0.2	6.60	0.55	0.69	19.9	-29.6	—	clear
1151	0.3	6.59	0.56	0.60	19.9	-38.5	—	clear
1154	0.4	6.60	0.55	0.62	20.0	-44.5	—	clear
1157	0.5	6.67	0.56	0.52	20.2	-56.7	—	clear
1200	0.6	6.65	0.55	0.85	20.2	-54.5	—	clear
1203	0.7	6.60	0.55	0.72	20.3	-53.6	—	clear
1206	0.8	6.60	0.556	0.61	20.0	-55.7	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1207	1/2 L Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-7	Date	9/05/17
Sample ID:	MW-7	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	0948
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0948	0.1	6.69	0.555	1.39	17.5	-41.9	—	clear
0951	0.2	6.51	0.523	0.72	17.6	-37.9	—	clear
0954	0.3	6.50	0.518	0.64	17.7	-40.5	—	clear
0957	0.4	6.54	0.516	0.41	17.9	-47.6	—	murky
1000	0.5	6.56	0.514	0.62	18.0	-51.6	—	clearing
1003	0.7	6.56	0.518	0.27	18.3	-55.4	—	clear
1006	0.8	6.57	0.521	0.26	18.2	-57.8	—	clear
1009	0.9	6.57	0.523	0.23	18.4	-59.8	—	clear
1012	1.0	6.57	0.526	0.21	18.5	-61.6		

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	1013	1/2 Ltr Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61901

Well ID:	MW-8	Date	9/5/17
Sample ID:	MW-8	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume (2"=0.163 x depth) (4"=0.653 x depth)	

Purge Method : Submersible pump / Bladder Pump / Peristaltic Pump / Other: : ____________

Start Time	0913
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
0915	0.1	6.60	1.07	4.54	20.4	0.3	—	clear
0918	0.2	6.57	1.07	1.60	20.8	-40.9	—	clear
0921	0.3	6.58	1.07	1.03	21.1	-58.9	—	clear
0924	0.4	6.62	1.07	0.64	21.0	-70.6	—	clear
0927	0.5	6.62	1.07	0.51	21.0	-76.7	—	clear
0930	0.6	6.62	1.07	0.44	20.9	-80.2	—	clear
0933	0.7	6.62	1.07	0.37	20.8	-83.5	—	clear
0936	0.8	6.52	1.07	0.34	20.8	-85.4	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO + ORO	0937	1/2 L + R amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO   Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

EPI Groundwater Sampling Field Data

Project Name: Estes West
Project Number: 61401

Well ID:	MW-9	Date	4/5/17
Sample ID:	MW-9	Field Team: (Initials)	JS
Field Conditions			

Purge Information

Well Diameter (in.)	2"
Well Depth (ft.)	
Initial Depth to Water (ft.)	
Depth of Water Column	
3 Casing Volumes	
1 Casing Volume	

(2"=0.163 x depth)
(4"=0.653 x depth)

Purge Method : Submersible pump
Bladder Pump
Peristaltic Pump
Other: : ____________

Start Time	1405
End Time	
Total Gallons Purged	

Time	Volume Gallons	pH	Conductivity ms/cm²	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Appearance/Notes
1408	0.1	6.64	0.62	0.66	19.4	44.3	—	clear
1411	0.2	6.61	0.62	0.48	19.6	-19.6	—	clear
1414	0.3	6.64	0.62	0.43	19.7	-36.9	—	clear
1417	0.4	6.67	0.61	0.44	19.7	-50.1	—	clear
1420	0.5	6.69	0.61	0.43	19.8	-58.9	—	clear
1423	0.6	6.71	0.61	0.42	19.6	-67.6	—	clear
1426	0.7	6.72	0.60	0.40	19.7	-73.4	—	clear
1429	0.8	6.72	0.60	0.38	19.8	-77.3	—	clear

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO+ORO	1430	1/2 L Amb	N/A	

End Time

Comments / Exceptions:

Presence of floating product? YES / NO Presence of sinking product? YES / NO

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

9/5/17

Scope: Groundwater monitoring

Conditions: Cloudy - 70°F

0530 J. Sherrod on-site, open wells and prepare for DTW collection. System running on arrival.

Well	DTW
MW-1	6.17
MW-2	6.32
MW-3	6.30
MW-4	6.39 → Cap loose, possibly due to AS pressure
MW-5	6.27
MW-6	6.23
MW-7	5.43
MW-8	5.31
MW-9	6.33

0700 EPI off-site

~~0830~~

0900 EPI on-site, Begin sampling. Please see stabilization sheets for well specific info.

9/5/17

Air Sparge Well	Pres.	Parameters Flow
AS-1	5	1
AS-2	7	1
AS-3	7	1
AS-4	7	1
AS-5	15	1
AS-6	11	5

1500 EPI off-site

JS

Attachment C
Analytical Laboratory Report

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
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www.friedmanandbruya.com

September 14, 2017

Doug Kunkel, Project Manager
Environmental Partners, Inc.
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 61901

Dear Mr Kunkel:

Included are the results from the testing of material submitted on September 6, 2017 from the 61901, F&BI 709085 project. There are 4 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
c: Cynthia Moon
EPI0914R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 6, 2017 by Friedman & Bruya, Inc. from the Environmental Partners 61901 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Partners
709085 -01	MW-8
709085 -02	MW-7
709085 -03	MW-3
709085 -04	MW-4
709085 -05	MW-6
709085 -06	MW-5
709085 -07	MW-2
709085 -08	MW-1
709085 -09	MW-9

All quality control requirements were acceptable.

Date of Report: 09/14/17
Date Received: 09/06/17
Project: 61901, F&BI 709085
Date Extracted: 09/11/17
Date Analyzed: 09/11/17

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 47-140)
MW-8 709085-01	160 x	<250	98
MW-7 709085-02	59 x	<250	93
MW-3 709085-03	210 x	<250	100
MW-4 709085-04	150 x	<250	101
MW-6 709085-05	320 x	<250	111
MW-5 709085-06	68 x	<250	102
MW-2 709085-07	100 x	<250	109
MW-1 709085-08	340 x	340 x	106
MW-9 709085-09	4,300 x	<250	88
Method Blank 07-1985 MB	<50	<250	98

Date of Report: 09/14/17
Date Received: 09/06/17
Project: 61901, F&BI 709085

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	92	88	61-133	4

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.

709085

SAMPLE CHAIN OF CUSTODY

ME 09-06-17

[redacted] 1 of 1 B05

Report To Doug Konkel

Company Environmental Partners Inc

Address 1180 NW Maple St.

City, State, ZIP Issaquah, WA 98027

Phone 425-395-0010 Email doug@epi-wa.com

SAMPLERS (signature)	
PROJECT NAME 61901	PO #
REMARKS	INVOICE TO

TURNAROUND TIME
☑ Standard Turnaround
☐ RUSH
Rush charges authorized by:
SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Dioxolo				Notes
MW-8	01	9/5/17	0937	Water	1								X				Samples received at 3 °C
MW-7	02	↓	1013	↓	↓								↓				
MW-3	03		1050														
MW-4	04		1134														
MW-6	05		1207														
MW-5	06		1236														
MW-2	07		1318														
MW-1	08		1353														
MW-9	09	↓	1430	↓	↓								↓				
																	Samples received at 3 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Sherrod	EPI	9/6/17	1342
Received by:	Roke	Fedex (SDC)	6 Sep 17	1342
Relinquished by:				
Received by:	Nhan Phan	FeBI	9/6/17	1600

Attachment D
Survey Report

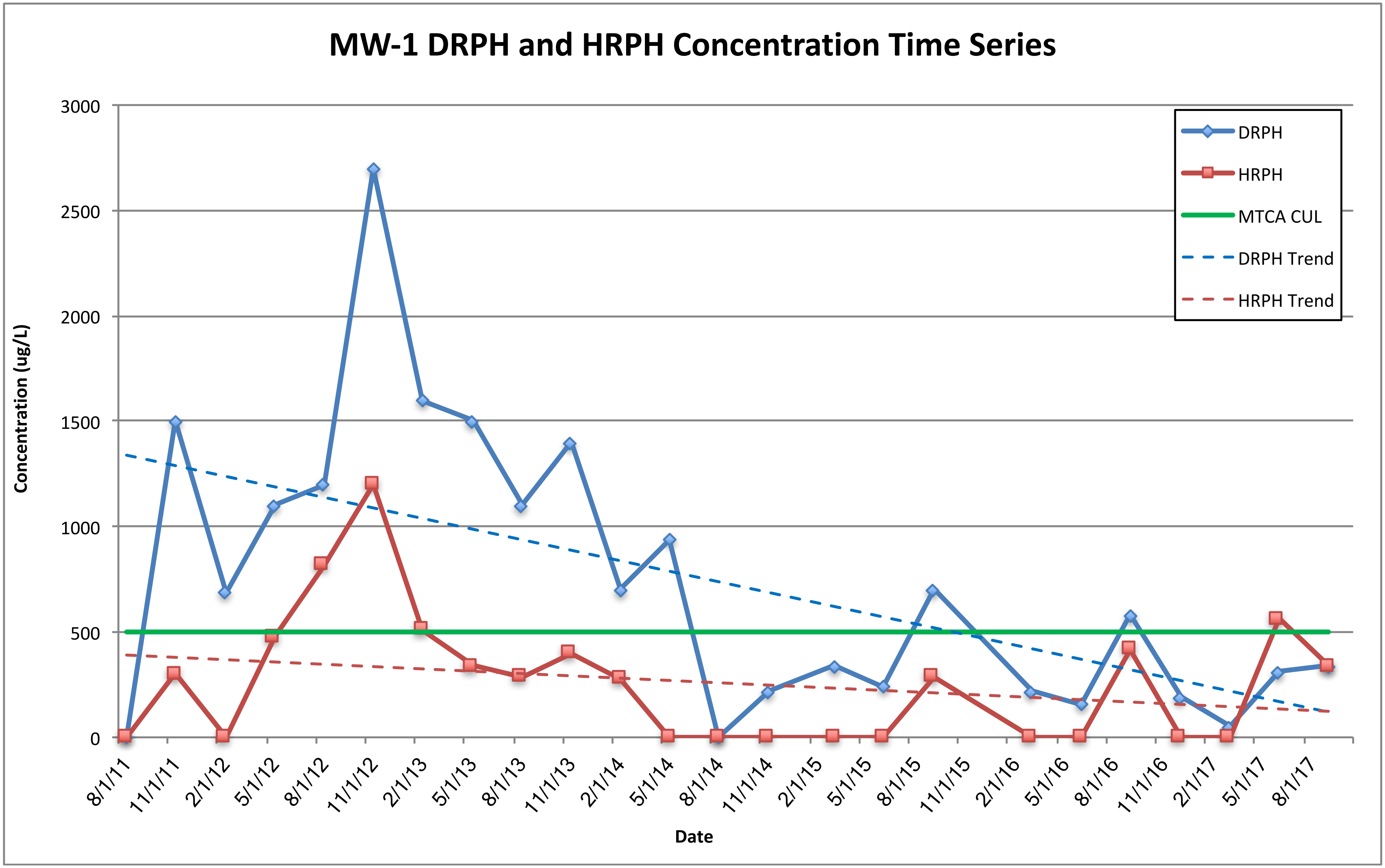
Project Name EPI Estes West Express Facility
Site Address 2102 West Valley Highway North
City and State Auburn, Washington

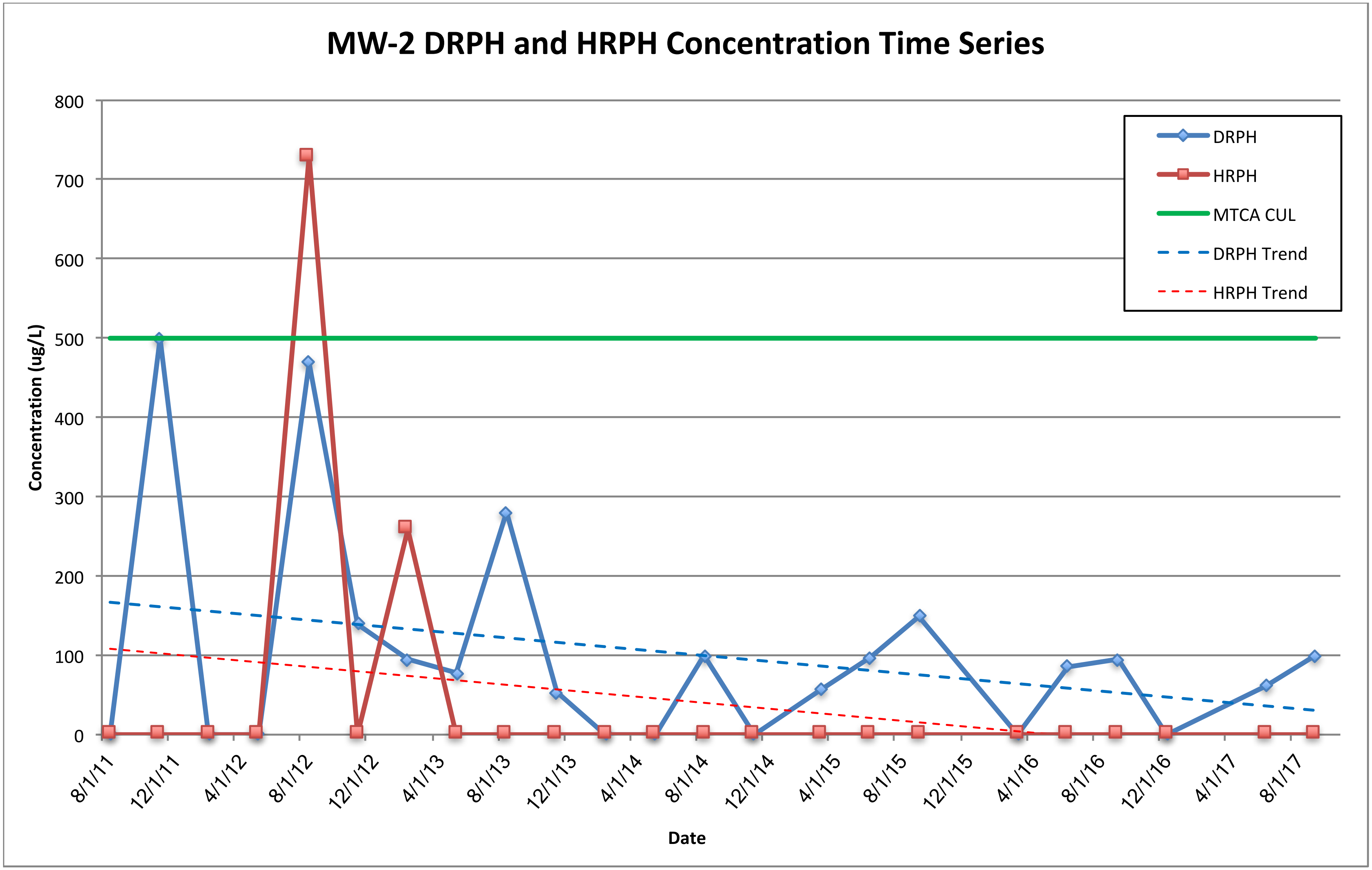
EPI Project No. 61901.1
PACE Project No. 17459.10

Horizontal Datum: NAD 83 (Washington State Plane, North Zone)
Vertical Datum: N.A.V.D. 88
Units: US survey feet

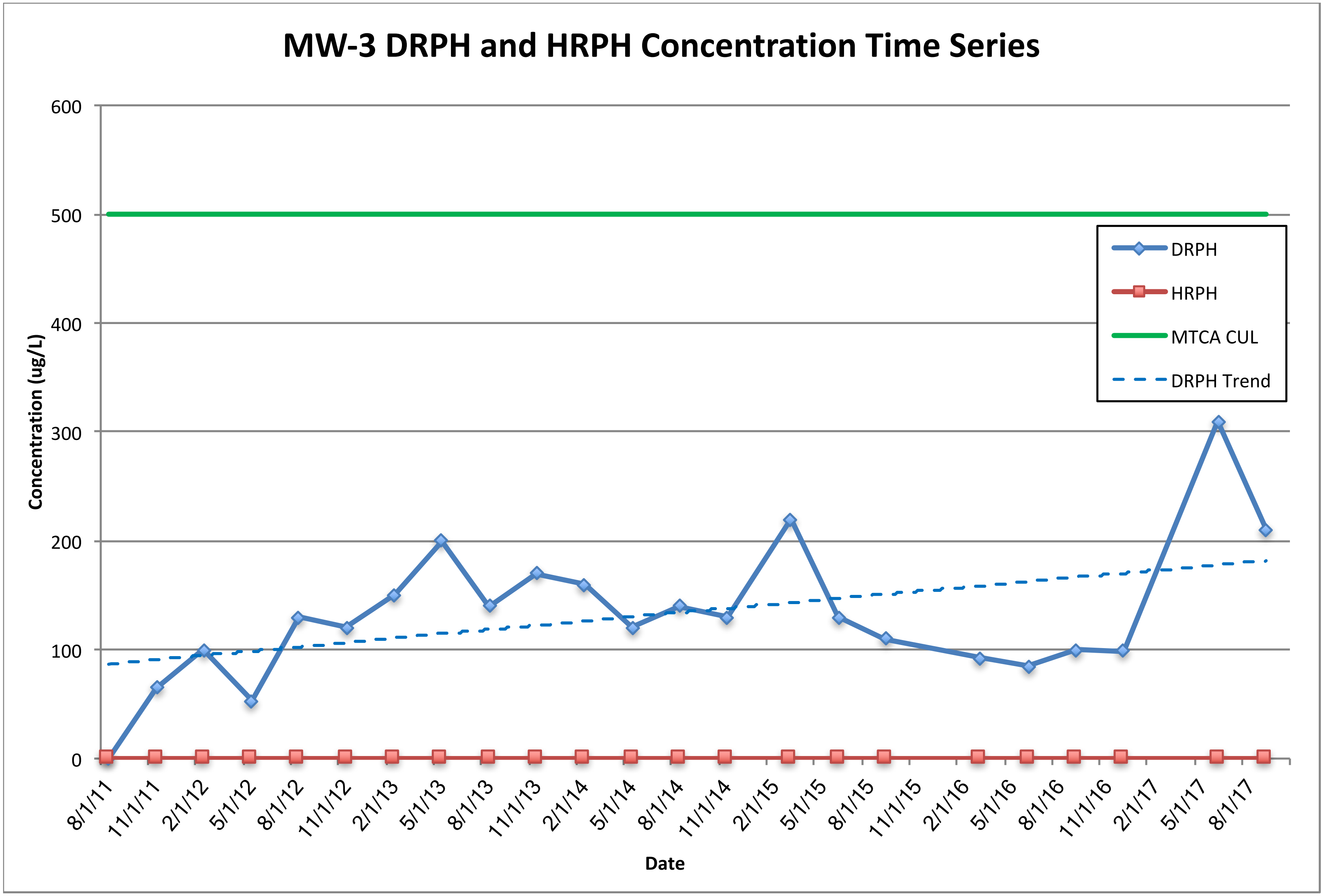
Name	Northing	Easting	Top of Casing Elevation	Ground Surface Elevation
Wells				
MW-1	122731.86	1289378.21	60.77	61.11
MW-2	122745.70	1289442.90	60.85	61.29
MW-3	122710.55	1289491.19	60.80	61.10
MW-4	122628.15	1289476.76	60.93	61.25
MW-5	122624.34	1289400.52	60.90	61.23
MW-6	122580.81	1289477.11	60.76	61.11
MW-7	122555.45	1289531.05	59.87	60.44
MW-8	122598.09	1289587.73	59.70	60.19
MW-9	122730.53	1289393.94	60.91	61.25
Catch Basins				
CB1	122705.72	1289333.39	NA	59.64
CB2	122689.10	1289590.86	NA	59.67
CB3	122545.78	1289588.95	NA	59.58
CB4	122549.50	1289442.27	NA	59.60
CB5	122586.68	1289331.15	NA	59.24
Air Injectiion Wells				
AI-1	122750.23	1289394.63	NA	61.2
AI-2	122739.35	1289365.85	NA	60.7
AI-3	122718.75	1289373.85	NA	61.0
AI-4	122638.52	1289465.80	NA	61.4
AI-5	122611.66	1289464.78	NA	61.0
AI-6R	122583.46	1289462.46	NA	61.2
Boreholes				
BH1	122606.78	1289487.99	NA	61.2
BH2	122595.65	1289487.88	NA	61.1

Attachment E
Time Series Plots

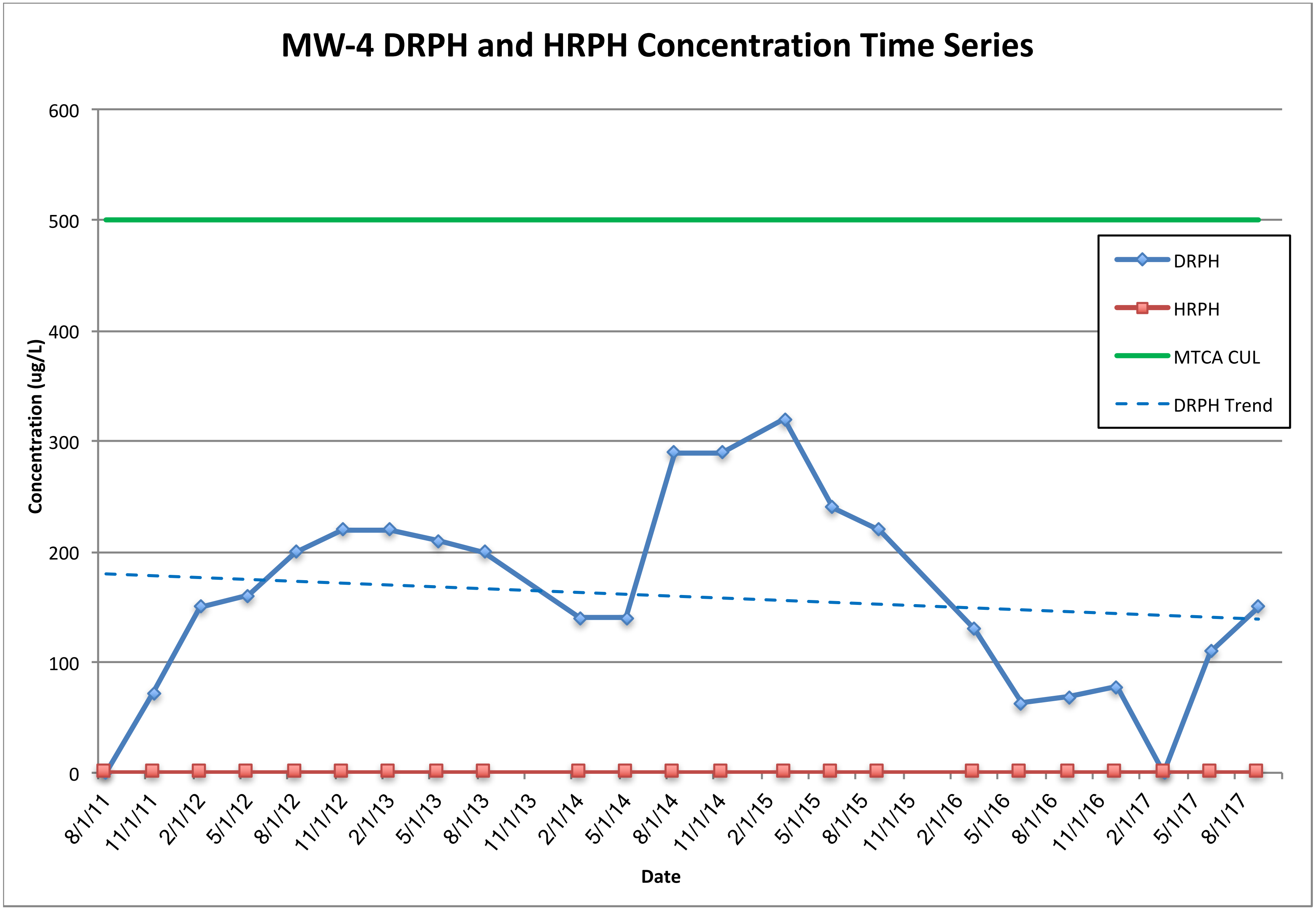

MW-1 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
3000
2500
2000
1500
1000
500
0
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date



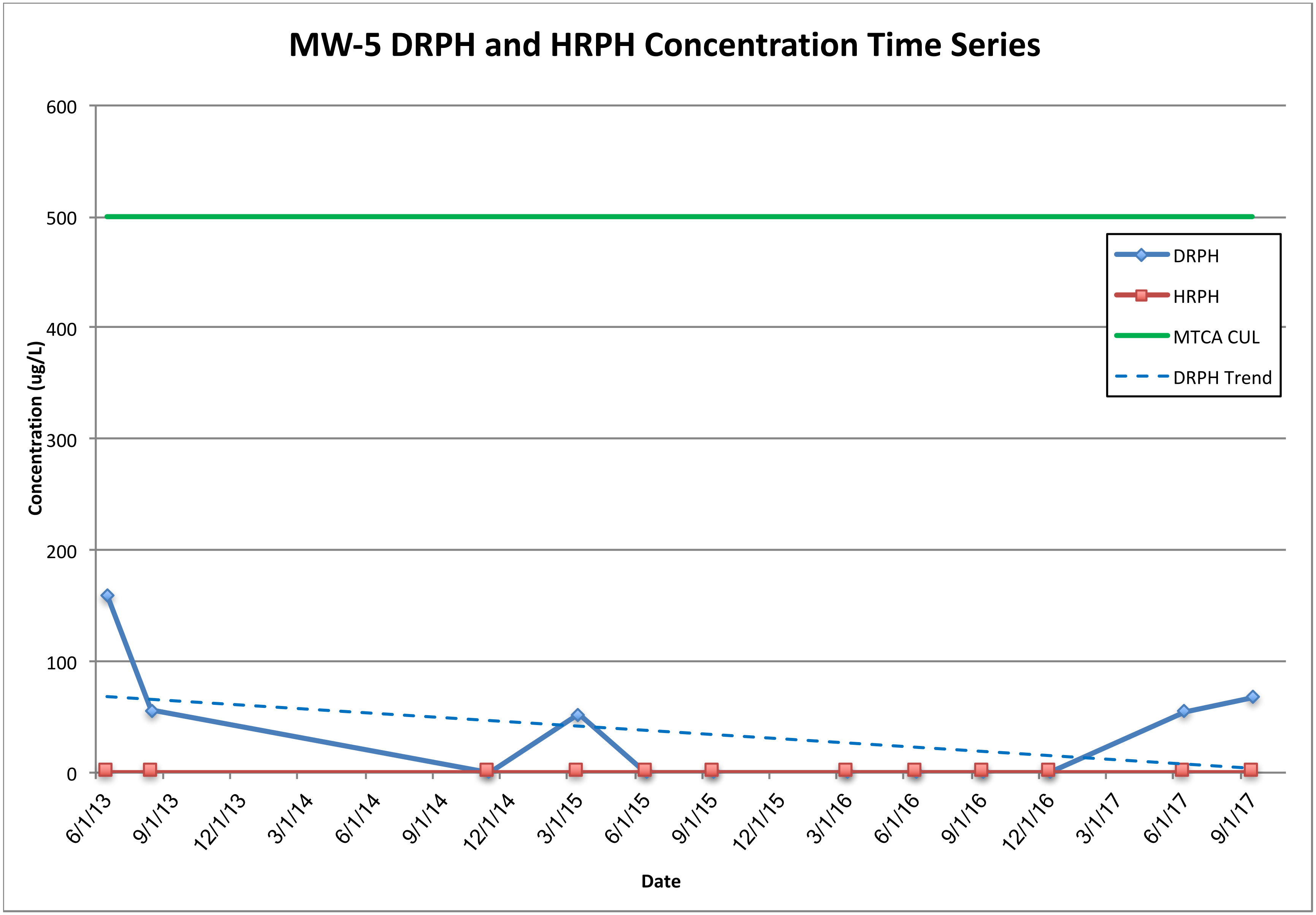
MW-2 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
800
700
600
500
400
300
200
100
0
8/1/11
12/1/11
4/1/12
8/1/12
12/1/12
4/1/13
8/1/13
12/1/13
4/1/14
8/1/14
12/1/14
4/1/15
8/1/15
12/1/15
4/1/16
8/1/16
12/1/16
4/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend
HRPH Trend

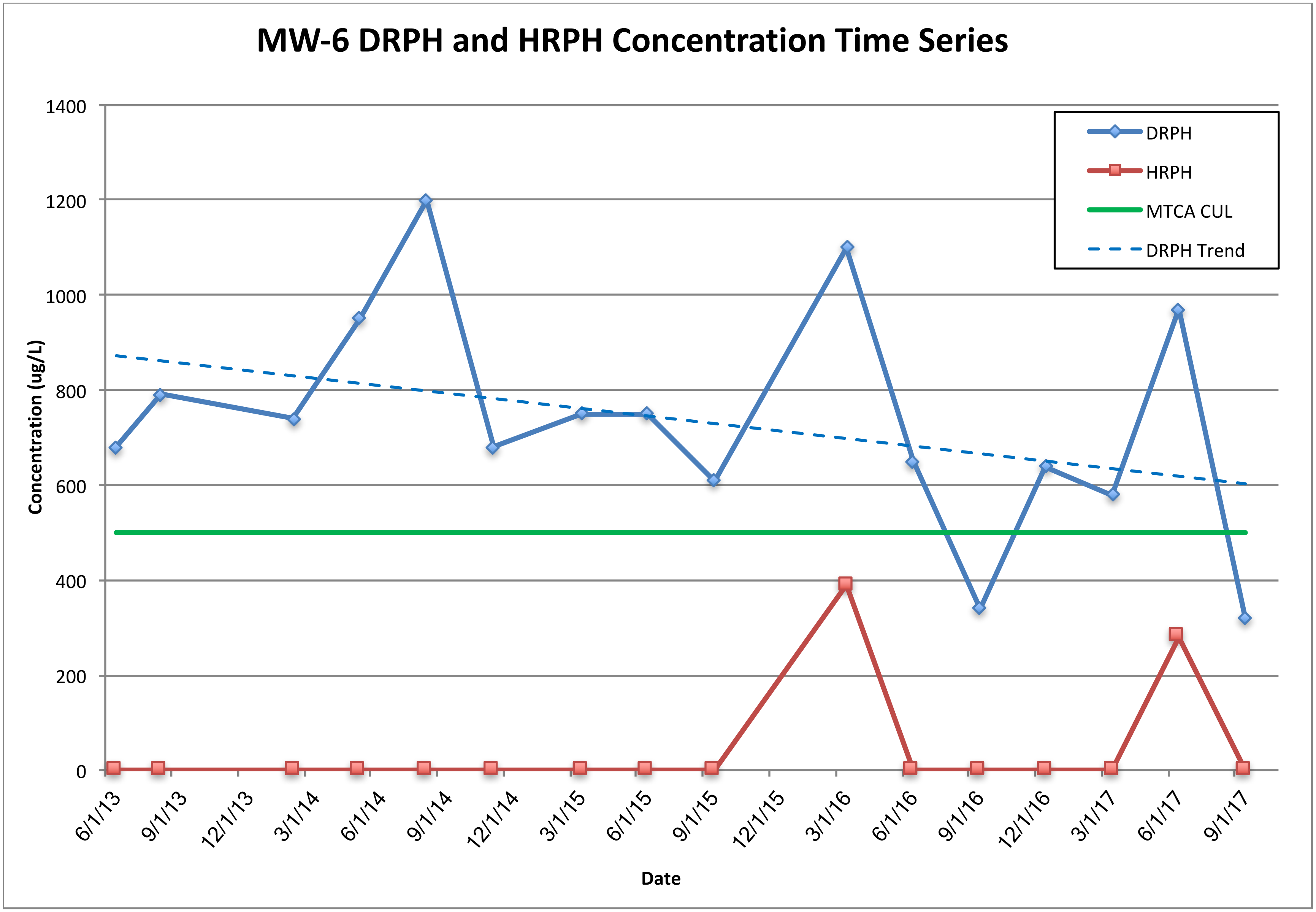


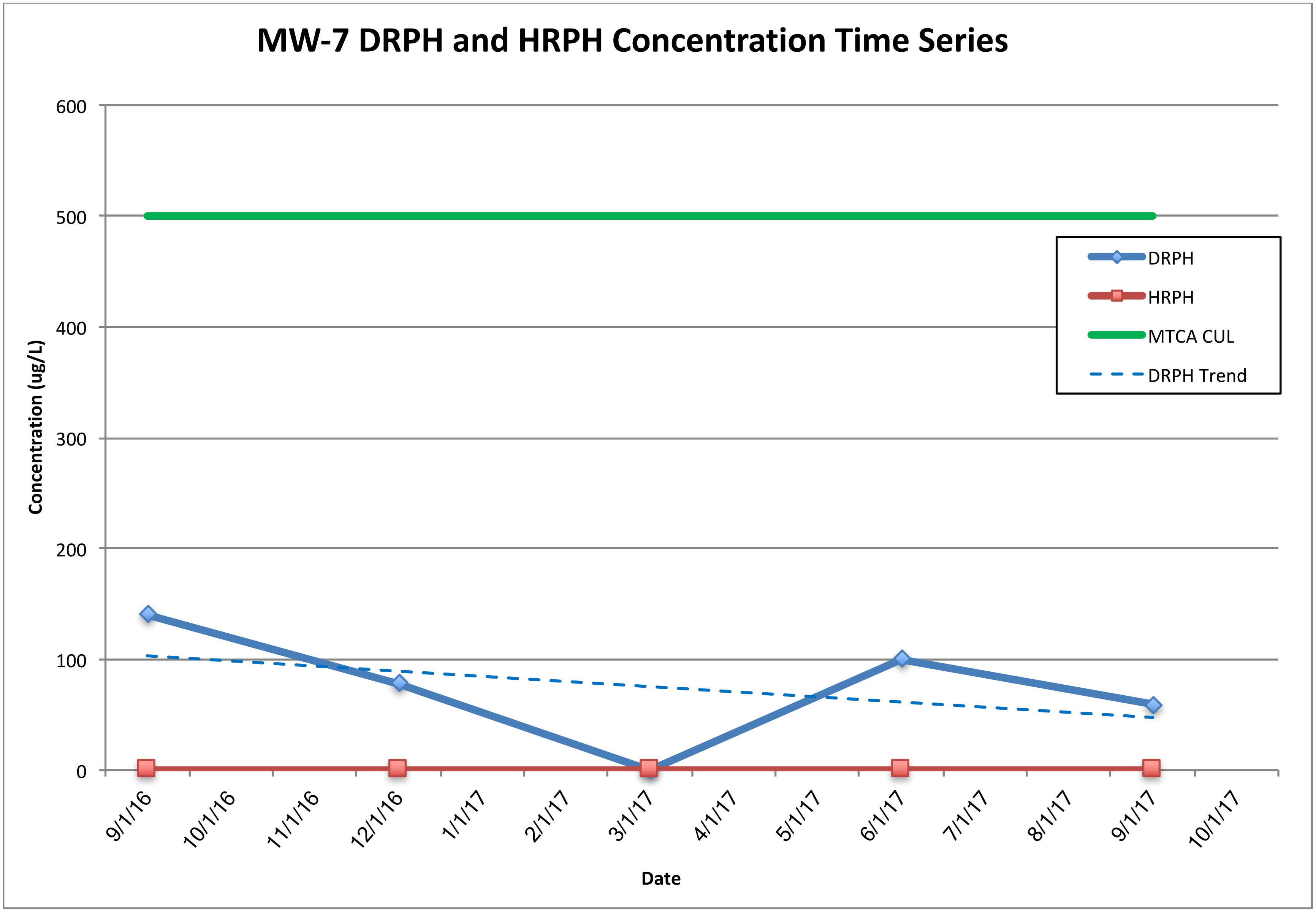
MW-3 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend



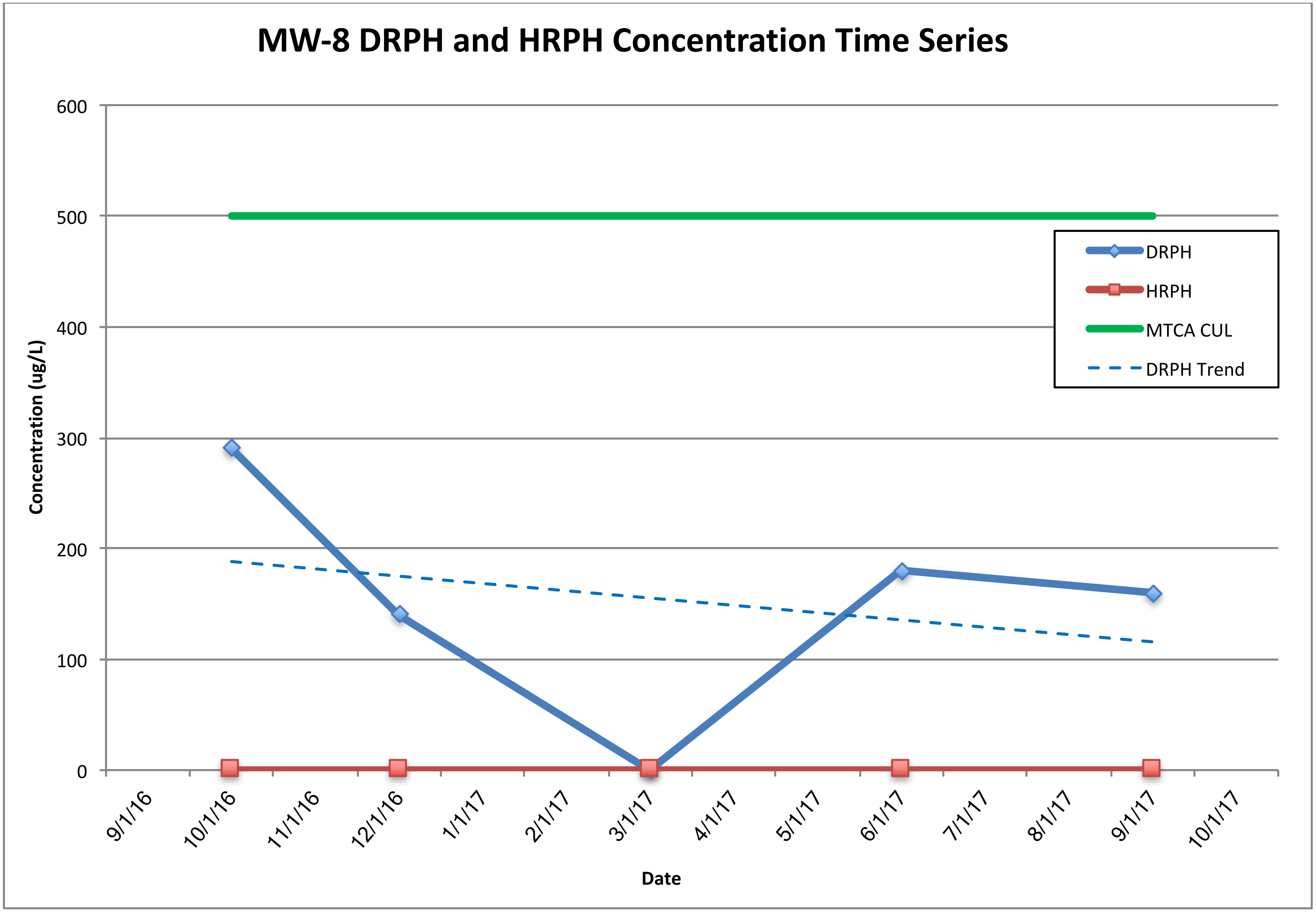
MW-4 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
8/1/11
11/1/11
2/1/12
5/1/12
8/1/12
11/1/12
2/1/13
5/1/13
8/1/13
11/1/13
2/1/14
5/1/14
8/1/14
11/1/14
2/1/15
5/1/15
8/1/15
11/1/15
2/1/16
5/1/16
8/1/16
11/1/16
2/1/17
5/1/17
8/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend


MW-5 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
6/1/17
9/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend


MW-6 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
0
200
400
600
800
1000
1200
1400
Date
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
6/1/15
9/1/15
12/1/15
3/1/16
6/1/16
9/1/16
12/1/16
3/1/17
6/1/17
9/1/17
DRPH
HRPH
MTCA CUL
DRPH Trend



MW-7 DRPH and HRPH Concentration Time Series
Concentration (ug/L)
600
500
400
300
200
100
0
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
4/1/17
5/1/17
6/1/17
7/1/17
8/1/17
9/1/17
10/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend


MW-8 DRPH and HRPH Concentration Time Series
600
500
400
300
200
100
0
Concentration (ug/L)
9/1/16
10/1/16
11/1/16
12/1/16
1/1/17
2/1/17
3/1/17
4/1/17
5/1/17
6/1/17
7/1/17
8/1/17
9/1/17
10/1/17
Date
DRPH
HRPH
MTCA CUL
DRPH Trend

Attachment D
Groundwater Elevation Contour Maps

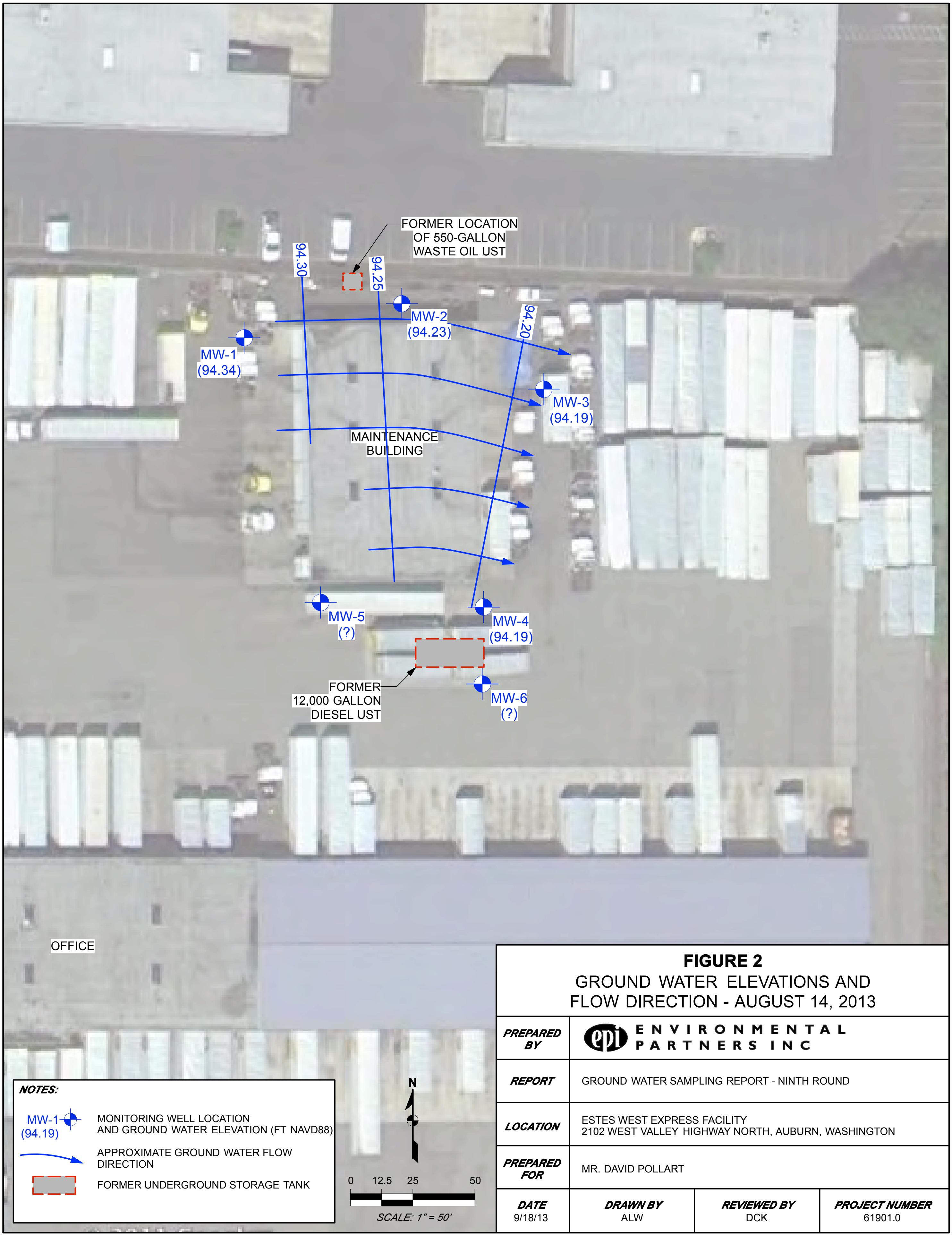


FIGURE 2
GROUND WATER ELEVATIONS AND FLOW DIRECTION - AUGUST 14, 2013

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	GROUND WATER SAMPLING REPORT - NINTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 9/18/13	***DRAWN BY*** ALW	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.0

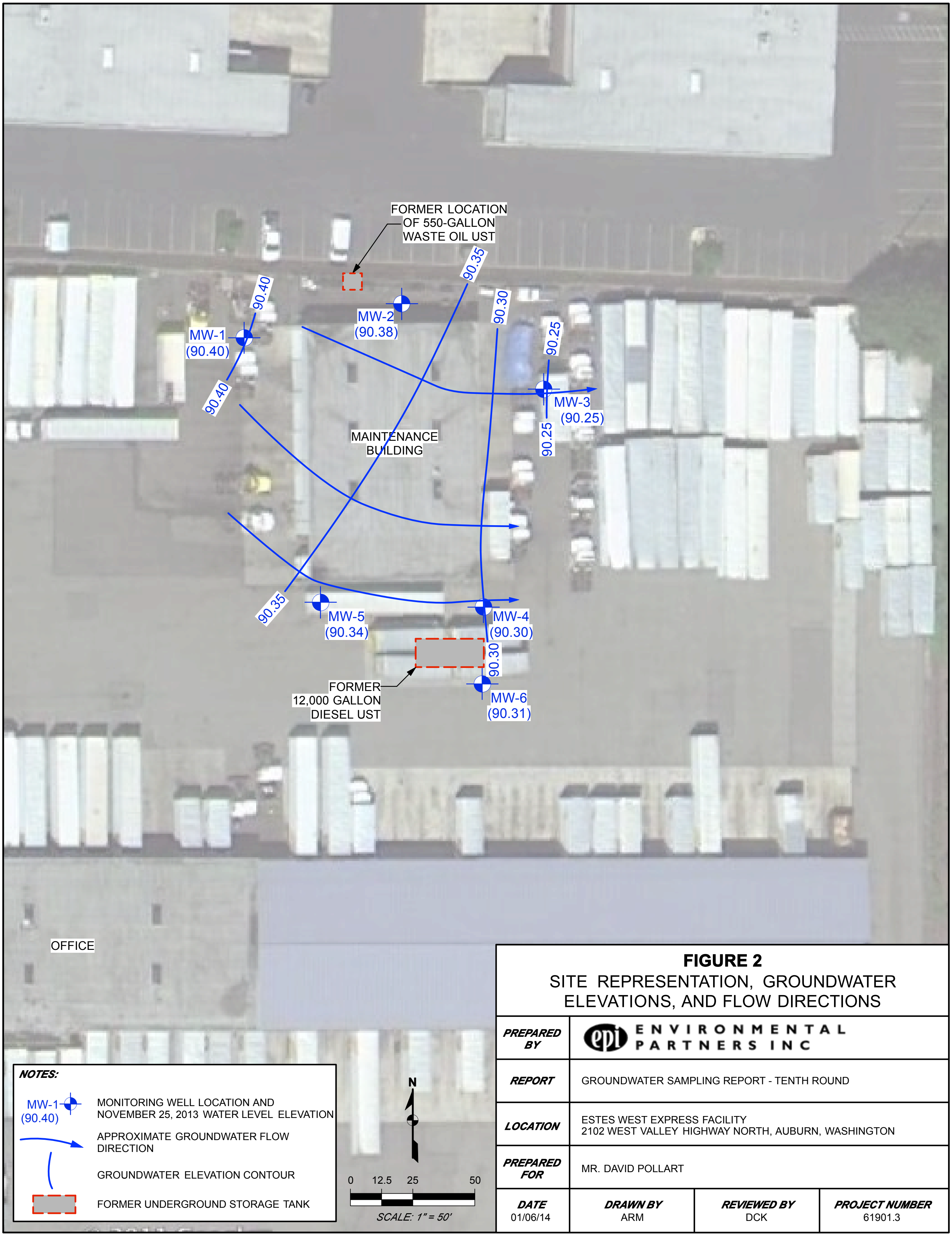


FIGURE 2

SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
01/06/14	ARM	DCK	61901.3

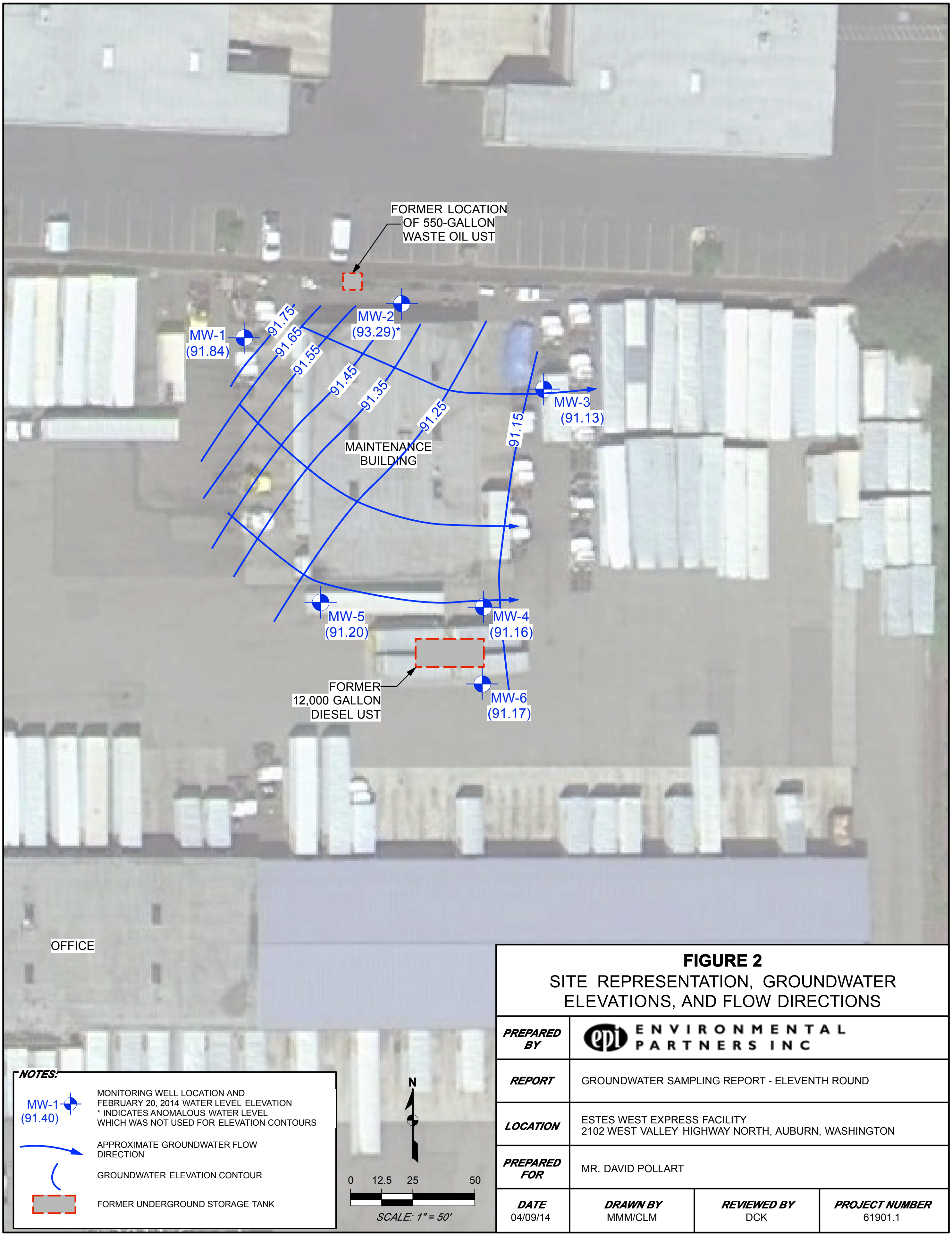


FIGURE 2

SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	GROUNDWATER SAMPLING REPORT - ELEVENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 04/09/14	***DRAWN BY*** MMM/CLM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

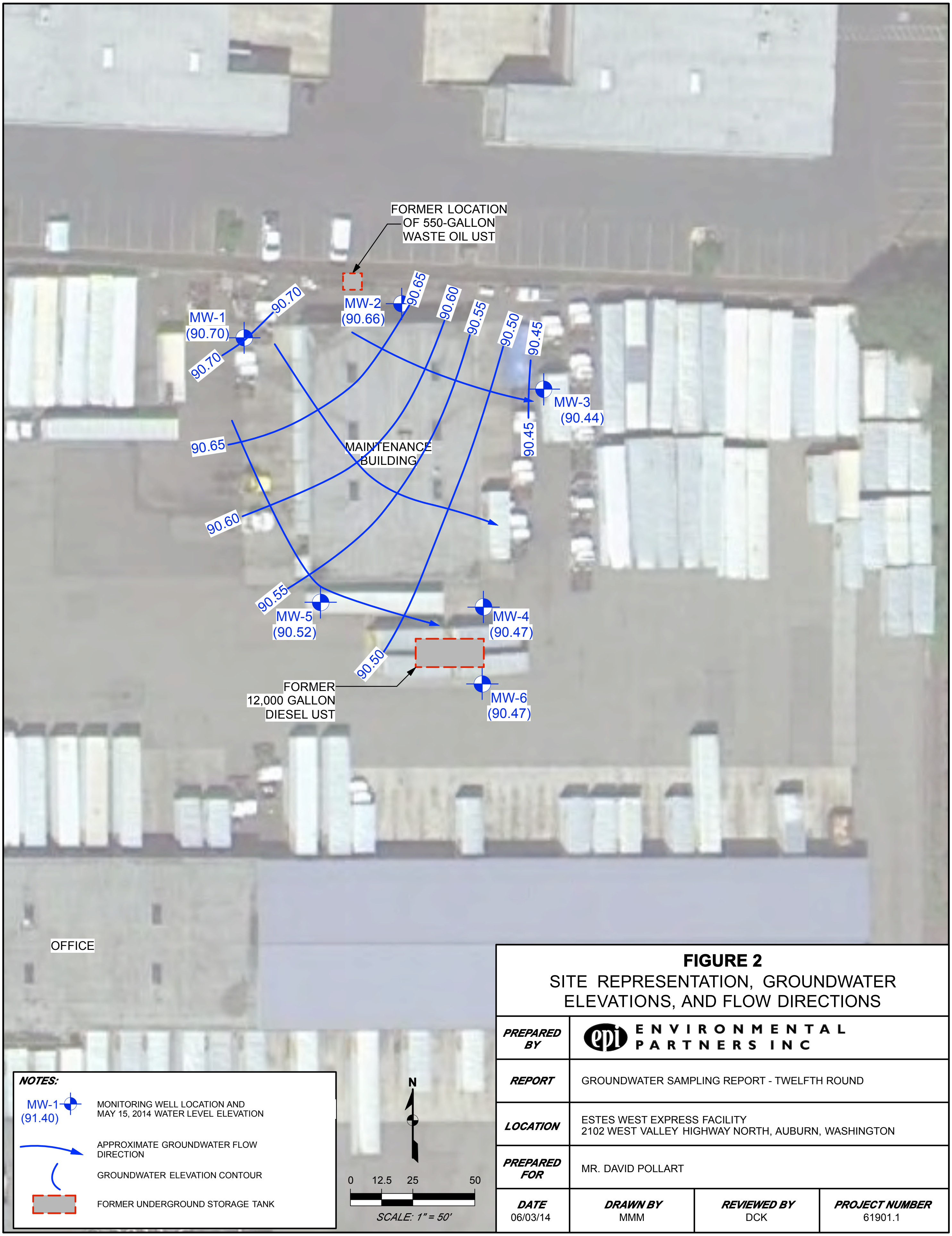
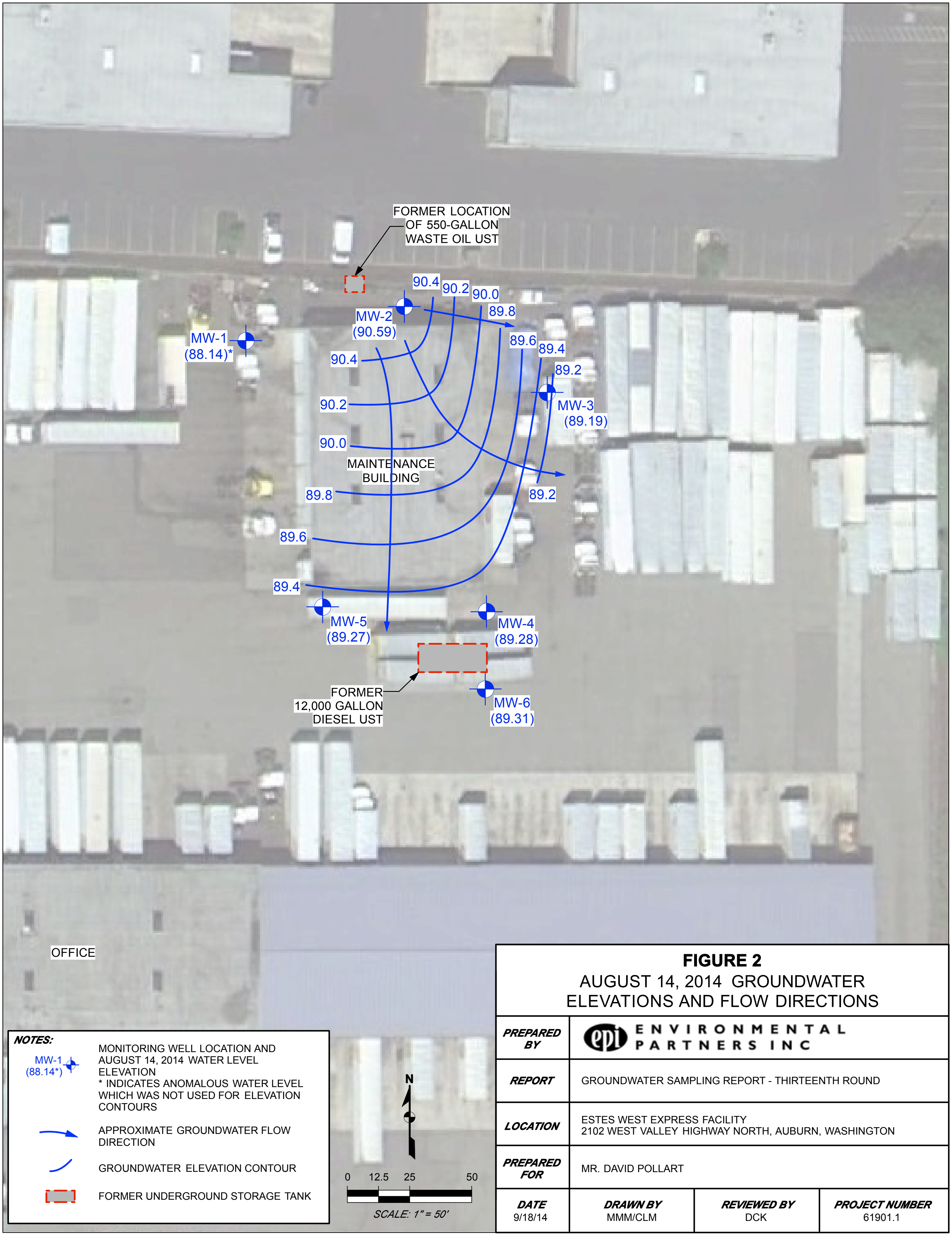


FIGURE 2
SITE REPRESENTATION, GROUNDWATER ELEVATIONS, AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - TWELFTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
06/03/14	MMM	DCK	61901.1



NOTES:

MW-1 (88.14*)	MONITORING WELL LOCATION AND AUGUST 14, 2014 WATER LEVEL ELEVATION * INDICATES ANOMALOUS WATER LEVEL WHICH WAS NOT USED FOR ELEVATION CONTOURS
	APPROXIMATE GROUNDWATER FLOW DIRECTION
	GROUNDWATER ELEVATION CONTOUR
	FORMER UNDERGROUND STORAGE TANK

FIGURE 2

AUGUST 14, 2014 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	GROUNDWATER SAMPLING REPORT - THIRTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 9/18/14	**DRAWN BY** MMM/CLM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

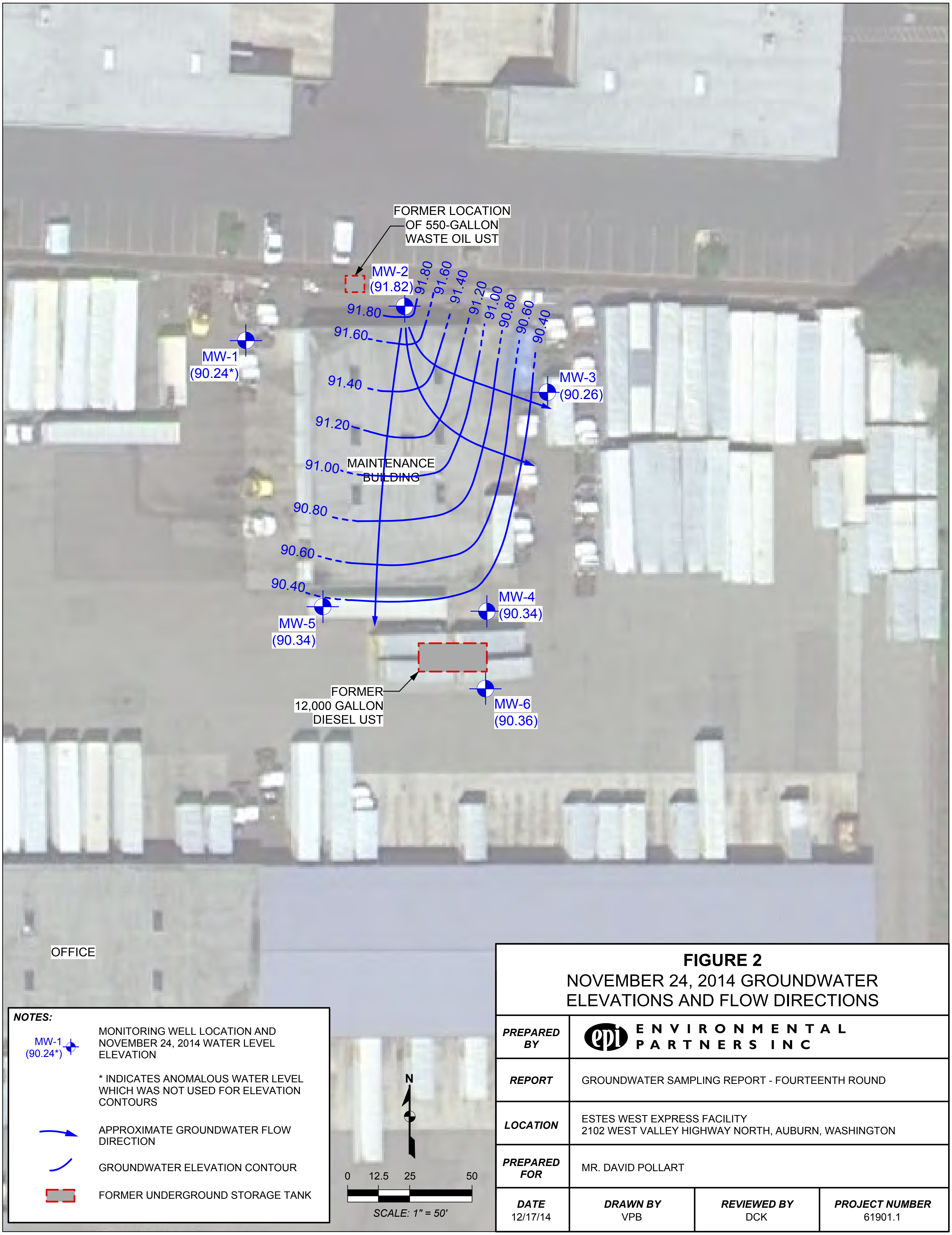


FIGURE 2
NOVEMBER 24, 2014 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	GROUNDWATER SAMPLING REPORT - FOURTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
12/17/14	VPB	DCK	61901.1

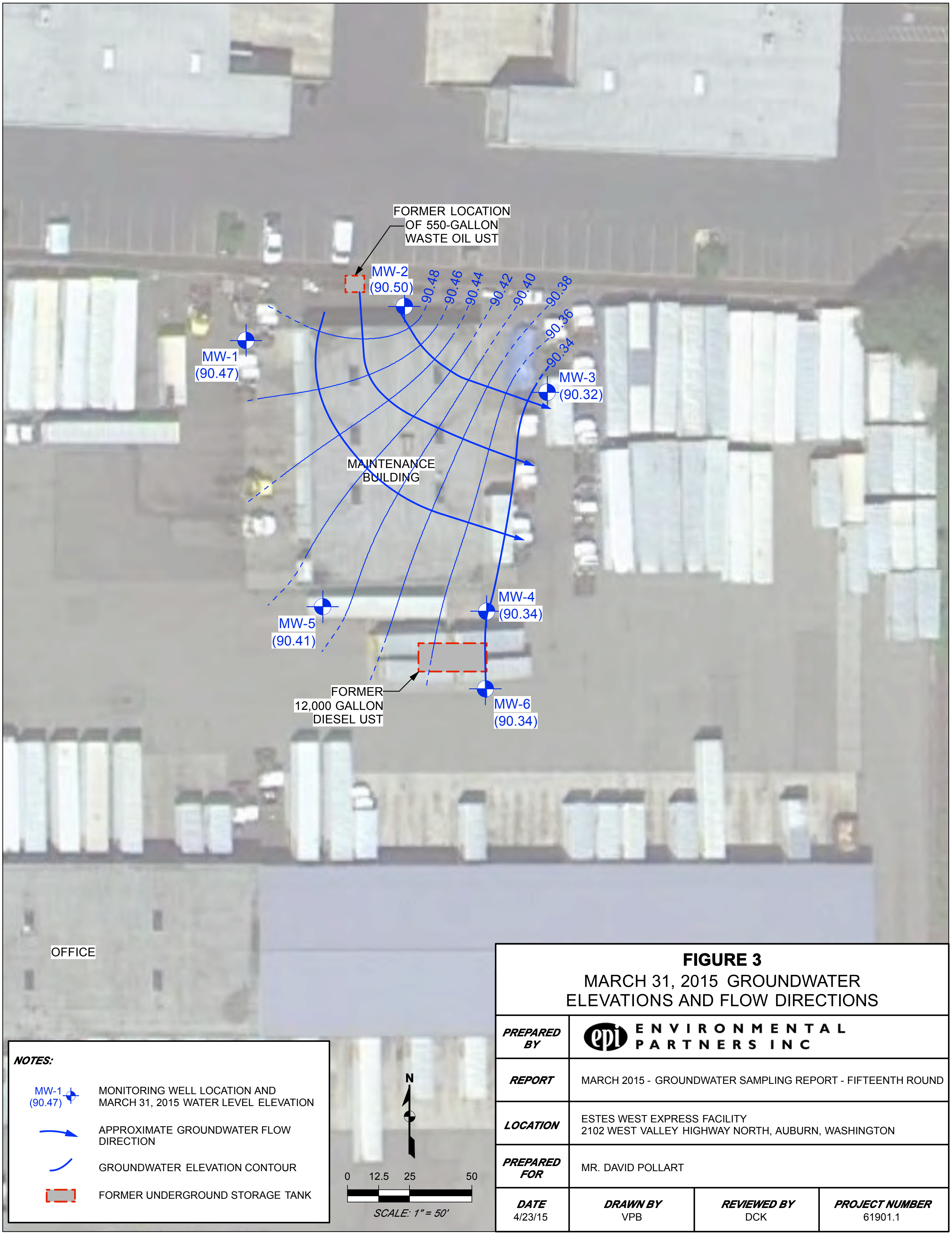
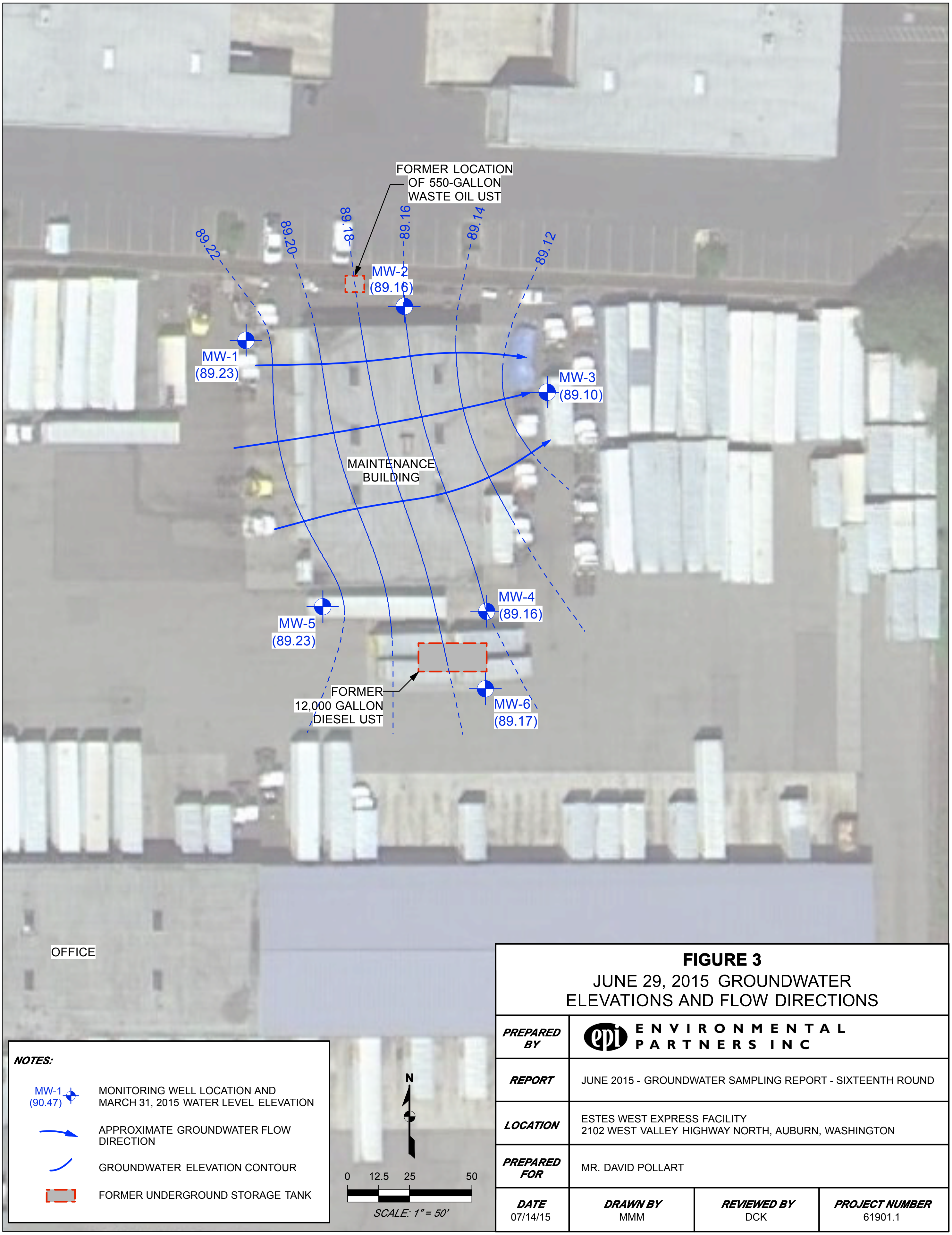


FIGURE 3
MARCH 31, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2015 - GROUNDWATER SAMPLING REPORT - FIFTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 4/23/15	**DRAWN BY** VPB	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1



NOTES:

MW-1 (90.47) — MONITORING WELL LOCATION AND MARCH 31, 2015 WATER LEVEL ELEVATION

APPROXIMATE GROUNDWATER FLOW DIRECTION

GROUNDWATER ELEVATION CONTOUR

FORMER UNDERGROUND STORAGE TANK

FIGURE 3
JUNE 29, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2015 - GROUNDWATER SAMPLING REPORT - SIXTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 07/14/15	**DRAWN BY** MMM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1

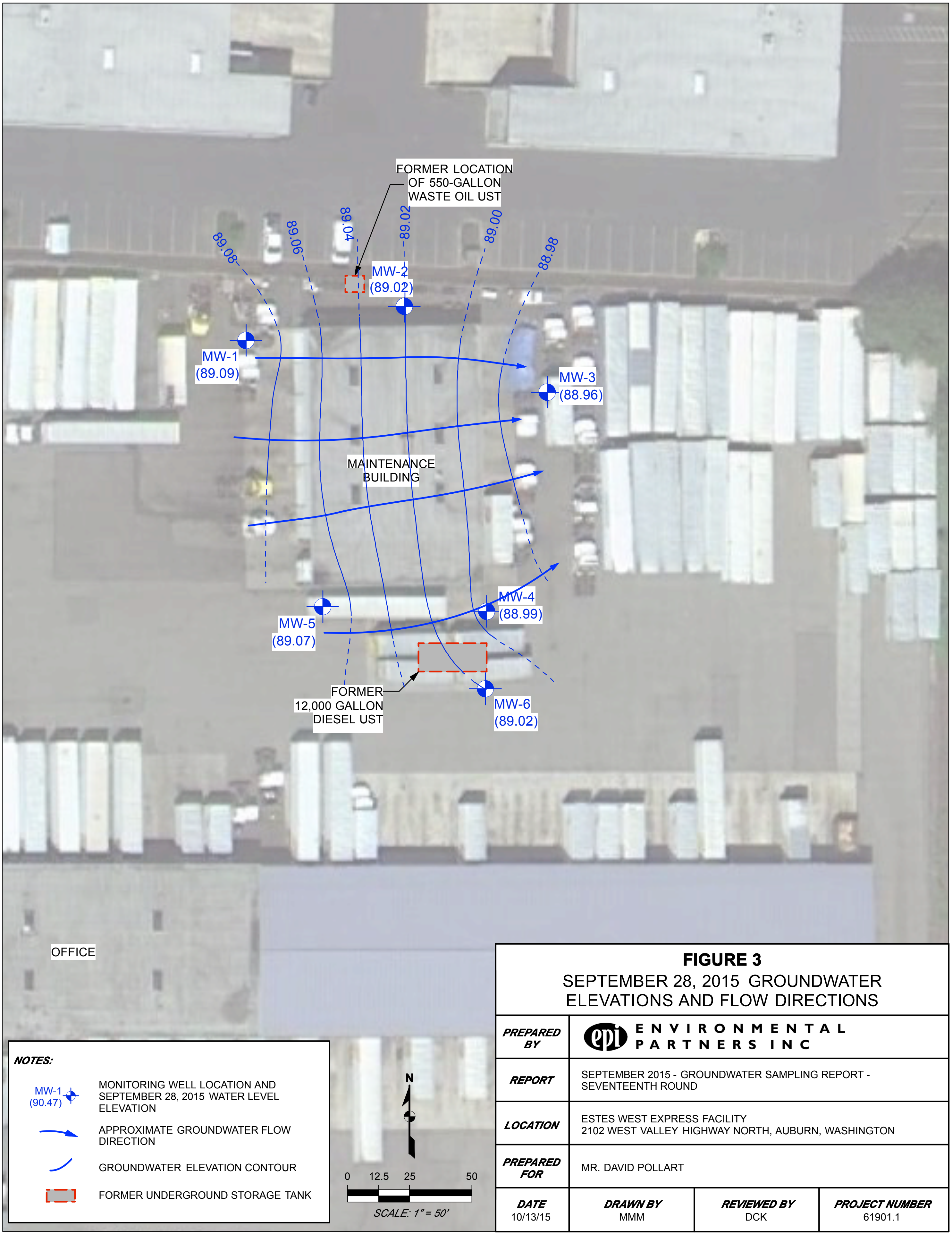
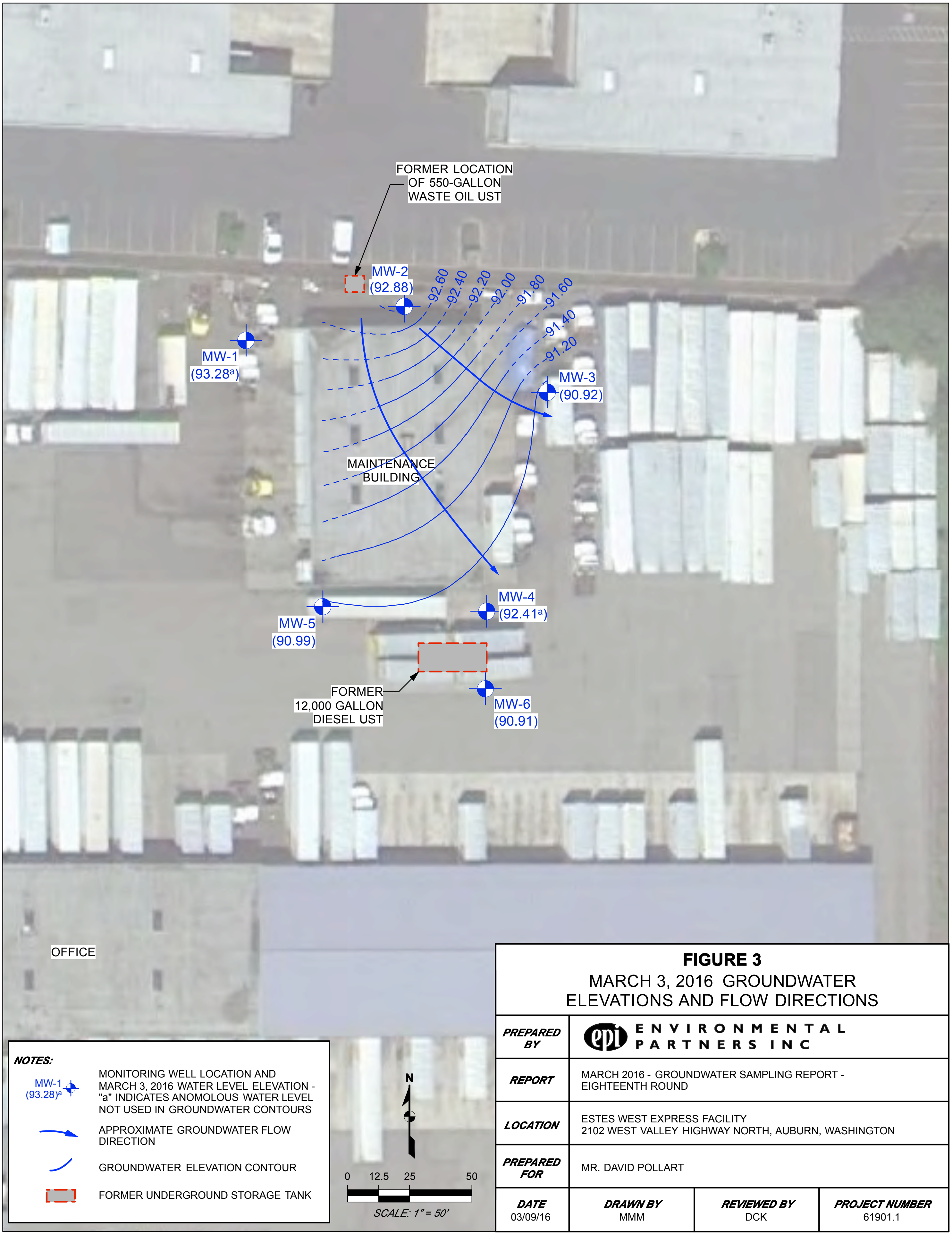


FIGURE 3
SEPTEMBER 28, 2015 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2015 - GROUNDWATER SAMPLING REPORT - SEVENTEENTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
10/13/15	MMM	DCK	61901.1



NOTES:

MW-1 (93.28)[a] — MONITORING WELL LOCATION AND MARCH 3, 2016 WATER LEVEL ELEVATION - "a" INDICATES ANOMOLOUS WATER LEVEL NOT USED IN GROUNDWATER CONTOURS

APPROXIMATE GROUNDWATER FLOW DIRECTION

GROUNDWATER ELEVATION CONTOUR

FORMER UNDERGROUND STORAGE TANK

FIGURE 3
MARCH 3, 2016 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2016 - GROUNDWATER SAMPLING REPORT - EIGHTEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 03/09/16	***DRAWN BY*** MMM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

NOTES:

MW-1 (89.64) — MONITORING WELL LOCATION AND JUNE 21, 2016 WATER LEVEL ELEVATION

APPROXIMATE GROUNDWATER FLOW DIRECTION

GROUNDWATER ELEVATION CONTOUR

FORMER UNDERGROUND STORAGE TANK

N

0 12.5 25 50

SCALE: 1" = 50'

FIGURE 3
JUNE 21, 2016 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2016 - GROUNDWATER SAMPLING REPORT - NINETEENTH ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 7/18/16	***DRAWN BY*** VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

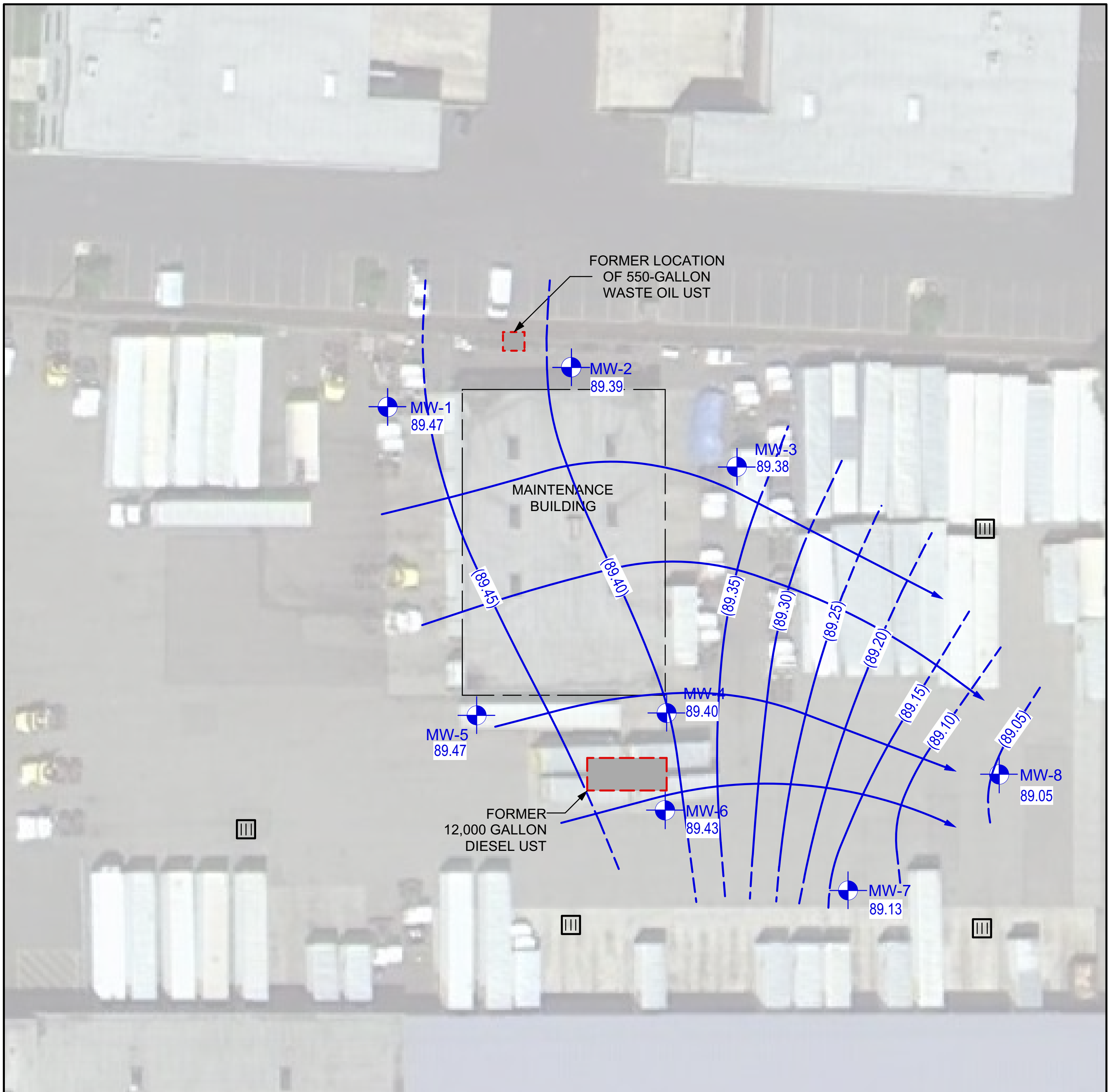


FIGURE 3

SEPTEMBER 16, 2016 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTIETH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
10/6/16	VPB	DCK	61901.1

NOTES:

- MW-1 89.47 — MONITORING WELL LOCATION AND SEPTEMBER 16, 2016 WATER LEVEL ELEVATION IN FEET
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- (89.45) — GROUNDWATER ELEVATION CONTOUR IN FEET
- FORMER UNDERGROUND STORAGE TANK
- CATCH BASIN

N

0 5 10 20

SCALE: 1" = 20'

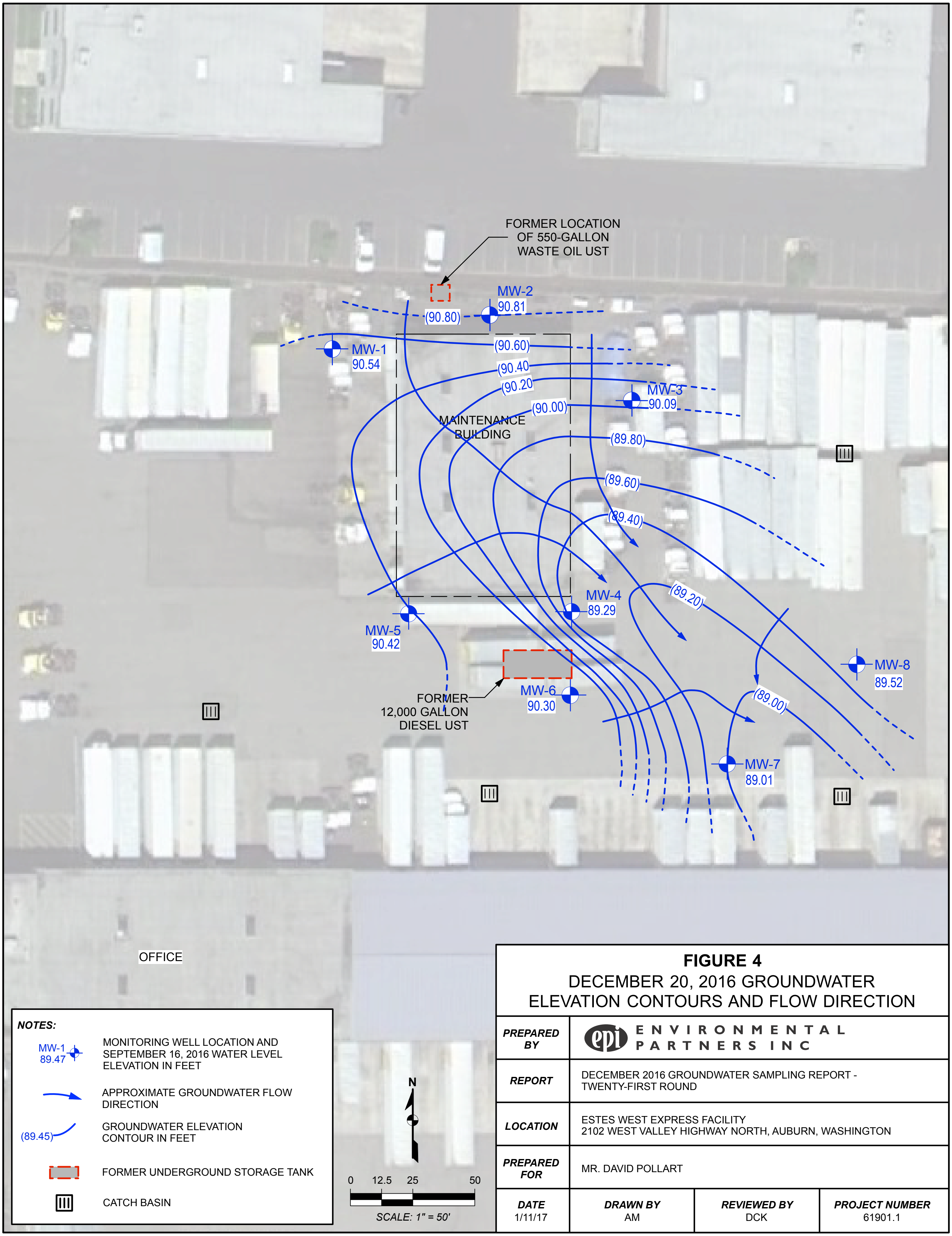
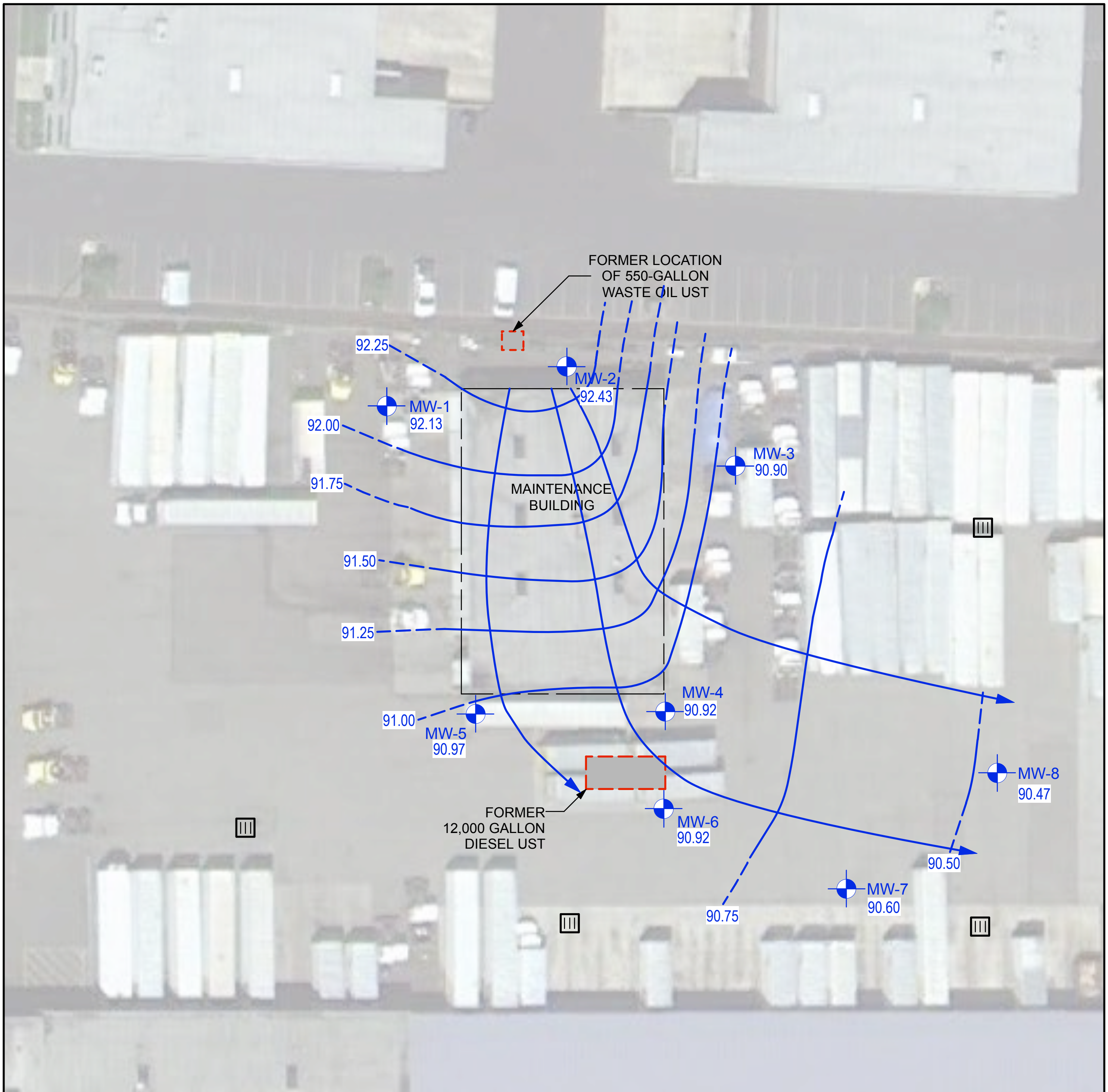


FIGURE 4
DECEMBER 20, 2016 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	DECEMBER 2016 GROUNDWATER SAMPLING REPORT - TWENTY-FIRST ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 1/11/17	**DRAWN BY** AM	**REVIEWED BY** DCK	**PROJECT NUMBER** 61901.1



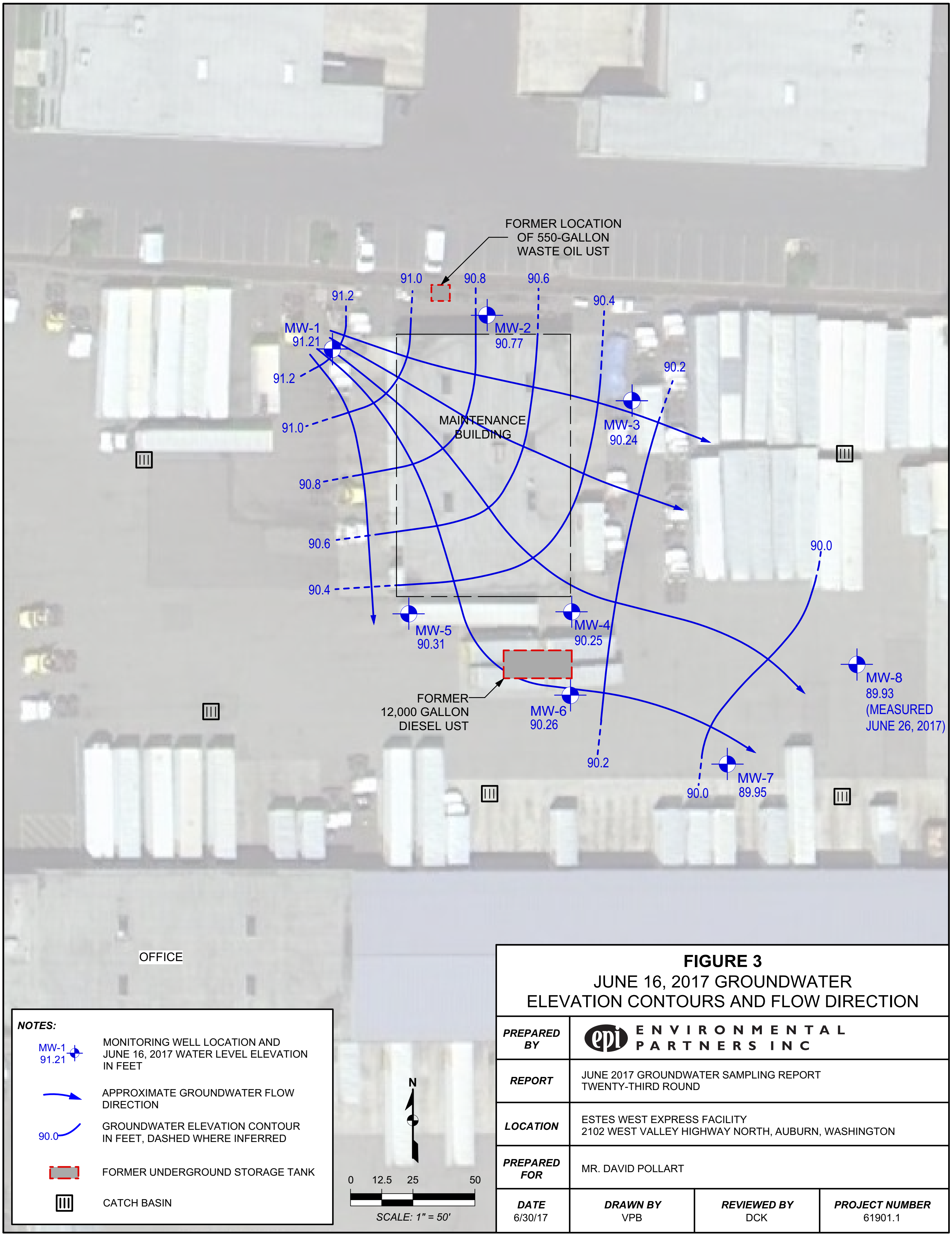
NOTES:

MW-1 89.47	MONITORING WELL LOCATION AND MARCH 24, 2017 WATER LEVEL ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION
(89.45)	GROUNDWATER ELEVATION CONTOUR IN FEET
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

FIGURE 3

MARCH 24, 2017 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	MARCH 2017 GROUNDWATER SAMPLING REPORT - TWENTY-SECOND ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 4/27/17	***DRAWN BY*** VPB/CLM	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1



NOTES:

MW-1 91.21	MONITORING WELL LOCATION AND JUNE 16, 2017 WATER LEVEL ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION
90.0	GROUNDWATER ELEVATION CONTOUR IN FEET, DASHED WHERE INFERRED
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

FIGURE 3
JUNE 16, 2017 GROUNDWATER
ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	epi ENVIRONMENTAL PARTNERS INC		
REPORT	JUNE 2017 GROUNDWATER SAMPLING REPORT TWENTY-THIRD ROUND		
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON		
PREPARED FOR	MR. DAVID POLLART		
DATE 6/30/17	***DRAWN BY*** VPB	***REVIEWED BY*** DCK	***PROJECT NUMBER*** 61901.1

NOTES:

MW-1 54.60	MONITORING WELL LOCATION AND SEPTEMBER 5, 2017 WATER LEVEL ELEVATION IN FEET (NAVD88)
	APPROXIMATE GROUNDWATER FLOW DIRECTION
54.60	GROUNDWATER ELEVATION CONTOUR IN FEET (NAVD88), DASHED WHERE INFERRED
	FORMER UNDERGROUND STORAGE TANK
	CATCH BASIN

0 12.5 25 50

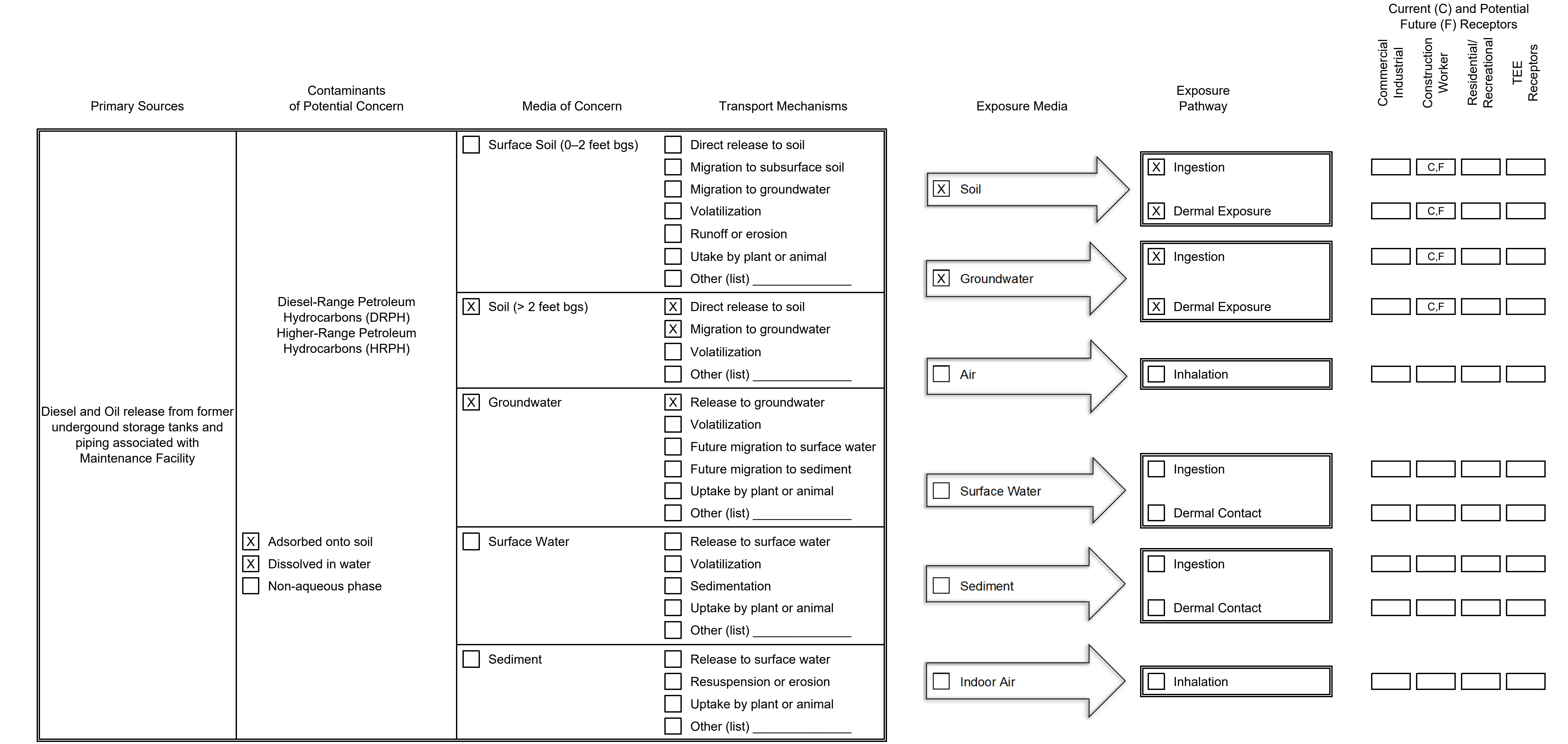
SCALE: 1" = 50'

FIGURE 3
SEPTEMBER 5, 2017 GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION

PREPARED BY	ENVIRONMENTAL PARTNERS INC
REPORT	SEPTEMBER 2017 GROUNDWATER SAMPLING REPORT TWENTY-FOURTH ROUND
LOCATION	ESTES WEST EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON
PREPARED FOR	MR. DAVID POLLART

DATE	***DRAWN BY***	***REVIEWED BY***	***PROJECT NUMBER***
9/21/17	VPB	DCK	61901.1

Attachment E
Conceptual Site Model



NOTES:
bgs = below ground surface

ATTACHMENT E
CONCEPTUAL SITE MODEL

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY/ CLEANUP ACTION PLAN		
LOCATION	PROVISIONERS EXPRESS (A.K.A. ESTES WEST) 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WA		
PREPARED FOR	MR. DAVID POLLART		
DATE 10/03/17	***DRAWN BY*** JMS	***REVIEWED BY*** XXX	***PROJECT NUMBER*** 61901.11

Attachment F
Terrestrial Ecological Evaluation

Terrestrial Ecological Evaluation Process- Simplified Evaluation

Documentation Form

Criteria # (Concern)	Criteria	Response (Circle One)
1 (exposure)	Is the total area of soil contamination at the site less than or equal to 350 square feet	**Yes (End TEE) / No**
2 (exposure)	Does land use at the site and surrounding area make substantial wildlife exposure unlikely based on completion of Table 749-1?	**Yes (End TEE) / No**
3 (pathway)	Is there a potential exposure pathway from soil contamination to soil biota, plants, or wildlife?	**Yes / No (End TEE)**
4 (contaminant)	Are the hazardous substances at your site listed in Table 749-2 and is (or will) their location in the soil at your site be at a depth not exceeding the point of compliance, and at concentrations that do not exceed the values provided in Table 749-2.	**Yes (End TEE) / No** **Note: You must perform bioassays for contaminants at your site if no table value is provided.**
5 (contaminant)	Will hazardous substances listed in Table 749-2 be present in the soil at your site within 6 feet of the ground surface at concentrations likely to be toxic, or with the potential to bioaccumulate, based on bioassays using methods approved by the department.	**Yes / No (End TEE)**

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation]
[Site-Specific Ecological Evaluation] [WAC 173-340-7493] [Index of Tables]

[TEE Home]

Attachment G
Draft Environmental Covenant

After Recording Return
Original Signed Covenant to:
Ms. Jing Song, LG
Toxics Cleanup Program
Department of Ecology
Northwest Regional Office
3190 160th Ave SE
Bellevue, WA 98008-5450

Environmental Covenant

(For MTCA Sites – August 20, 2015 version)

Grantor: David G. Pollart, a single person as his separate estate
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: A portion of the Northwest Quarter of the Northwest Quarter of Section 12 – Township 21N – Range 4E, King County, Washington
Tax Parcel Nos.: Parcel A: 122104-9034-08
Cross Reference: This Environmental Covenant supersedes the Original Restrictive Covenant, recording number 19990826000894, dated August 25, 1999

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part of a site commonly known as **Provisioners Express, a.k.a. Estes Express Lines. Facility Site #91612121.** The Property is legally described in "Exhibit A", and illustrated in "Exhibit B", both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in "Exhibit B" shall prevail.

c. A portion of the Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on a portion of the Property after completion of remedial actions. Specifically, the following principal contaminants remain on portions of the Property shown in "Exhibit C":

Medium	Principal Contaminants Present
Soil	Diesel- and oil-range petroleum hydrocarbons
Groundwater	Diesel- and oil-range petroleum hydrocarbons
Surface Water/Sediment	None

d. It is the purpose of this Covenant to restrict certain activities and uses of the portion of the Property shown in "Exhibit C", attached hereto and made a part hereof, to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology.

e. This Covenant grants Ecology certain rights specified in this Covenant. The right of Ecology as a holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the

Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") 42 USC Chapter 103.

f. This Covenant supersedes and replaces the existing Environmental (Restrictive) Covenant, which is recorded with King County as recording number 19990826000894.

COVENANT

David G. Pollart, as Grantor and **fee simple** owner of the Property hereby grants to Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the portion of the Property identified in "Exhibit C".

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the portion of the Property identified in "Exhibit C":

a. Interference with Remedial Action. The Grantor and any Tenant may continue to traverse the contaminated portion of the property. However, the Grantor and any Tenant shall not engage in any activity on the portion of the Property identified in "Exhibit C" that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor and any Tenant shall not engage in any activity on the portion of the Property identified in "Exhibit C" that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in the portion of the Property identified in "Exhibit C" without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any existing or future lease for the portion of the Property identified in "Exhibit C" to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of that portion of the Property.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to that portion of the Property identified in "Exhibit C".

a. The remedial action for the portion of the Property identified in "Exhibit C" is based on a cleanup designed for industrial or commercial property. As such, the portion of the Property identified in "Exhibit C" shall be used in perpetuity only for industrial or commercial uses, as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, growing of food crops.

b. The portion of the Property identified in "Exhibit C" contains soil contaminated by diesel- and oil-range petroleum hydrocarbons, under the floor, north wall, and foundation of the truck maintenance building located on the northeast portion of the Property, as described in the environmental reports listed above and as illustrated in “Exhibit C”. The Grantor shall not alter, modify, or remove the existing structure of the truck maintenance building in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology. Should the Grantor propose to remove all or a portion of the truck maintenance building illustrated in “Exhibit C” so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil.

c. The groundwater within the area of the Property illustrated in “Exhibit C” remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted from within this area for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

d. Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage and until such time the wells are decommissioned with Ecology approval.

e. The Grantor shall report to Ecology within forty- eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage, submit a report documenting this work to Ecology within thirty (30) days of completing the repairs, and obtain proof of closure of the incident from Ecology.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter that portion of the Property identified in “Exhibit C” at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on that portion of the Property identified in “Exhibit C”, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest within the portion of the Property described and illustrated in “Exhibit C”, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON ______________ AND RECORDED WITH THE KING COUNTY AUDITOR UNDER RECORDING NUMBER __________________. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. **Notification procedure.** Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

Mr. David G. Pollart PO Box 1096 Mercer Island, WA 98040-1096 (206) 948-1330 dapol13@gmail.com	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

As an alternative to providing written notice and chang in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

[GRANTOR'S SIGNATURE BLOCK FOR AMENDED COVENANTS]

Each person who signs must have a separate signature block and applicable notary acknowledgment. Repeat as many times as necessary.

When amending a Covenant, each GRANTOR of the existing Covenant must sign the amended Covenant unless the GRANTOR waived its rights under Section 5(b) of the Covenant.

Holders of other property interests must either sign the amended Covenant as a GRANTOR or sign the subordination agreement in Exhibit D.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this_______________day of____________________, 20___.

The undersigned further acknowledges the Restrictive Covenant recording number 19990826000894 filed in King County, is hereby terminated and replaced with the above Environmental Covenant.

_______________ [SIGNATURE] ____________

by:___________[PRINTED NAME] ___________

Title: ___________________________________

Insert one of the following, as applicable. See example format on next page:

INDIVIDUAL ACKNOWLEDGMENT
CORPORATE ACKNOWLEDGMENT
REPRESENTATIVE ACKNOWLEDGEMENT

INDIVIDUAL ACKNOWLEDGMENT

STATE OF ______________________
COUNTY OF ____________________

On this______________day of_, 20__, I certify that ____ personally appeared before me, acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

____
Notary Public in and for the State of Washington [1]
Residing at __________________________________
My appointment expires ______________________

CORPORATE ACKNOWLEDGMENT

STATE OF ______________________
COUNTY OF ____________________

On this ______ day of___________________________, 20__, I certify that ____________________ personally appeared before me, acknowledged that **he/she** is the ____________________________ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

____
Notary Public in and for the State of Washington [15]
Residing at __________________________________
My appointment expires ______________________

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF _______________________
COUNTY OF _____________________

On this ______ day of___________________________, 20__, I certify that ____________________ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the [TYPE OF AUTHORITY] of____[NAME OF PARTY BEING REPRESENTED] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

____
Notary Public in and for the State of Washington [15]
Residing at __________________________________
My appointment expires ______________________

[1] Where landowner is located out of state, replace with appropriate out-of-state title and location.

[ECOLOGY'S SIGNATURE BLOCK]

The Department of Ecology**,** hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____________ [SIGNATURE] ___________

by:_________[PRINTED NAME] __________

Title: ______________________________

Dated: _____________________________

STATE ACKNOWLEDGMENT

STATE OF ___________________________

COUNTY OF _________________________

On this_____________day of_____________, 20__, I certify that ___________________________ personally appeared before me, acknowledged that **he/she** is the ______________________________ of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said state agency.

____

Notary Public in and for the State of Washington

Residing at ____

My appointment expires ____

Exhibit A

LEGAL DESCRIPTION

Parcel A:

THE EAST 500 FEET OF THE WEST 536 FEET OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 4 EAST, WILLAMETTE MERIDIAN IN KING COUNTY, WASHINGTON;
EXCEPT THE SOUTH 60 FEET THEREOF; AND
EXCEPT THE NORTH 742.12 FEET THEREOF;

(ALSO KNOWN AS LOT 3 OF CITY OF AUBURN LOT LINE ADJUSTMENT NO. LLA-11-87, RECORDED UNDER RECORDING NUMBER 8706221496, BEING LOTS 3 AND A PORTION OF LOT 2 OF THE CITY OF AUBURN SHORT PLAT NUMBER SP-3-86, RECORDED UNDER RECORDING NUMBER 8606050397.)

Exhibit B

Property Map

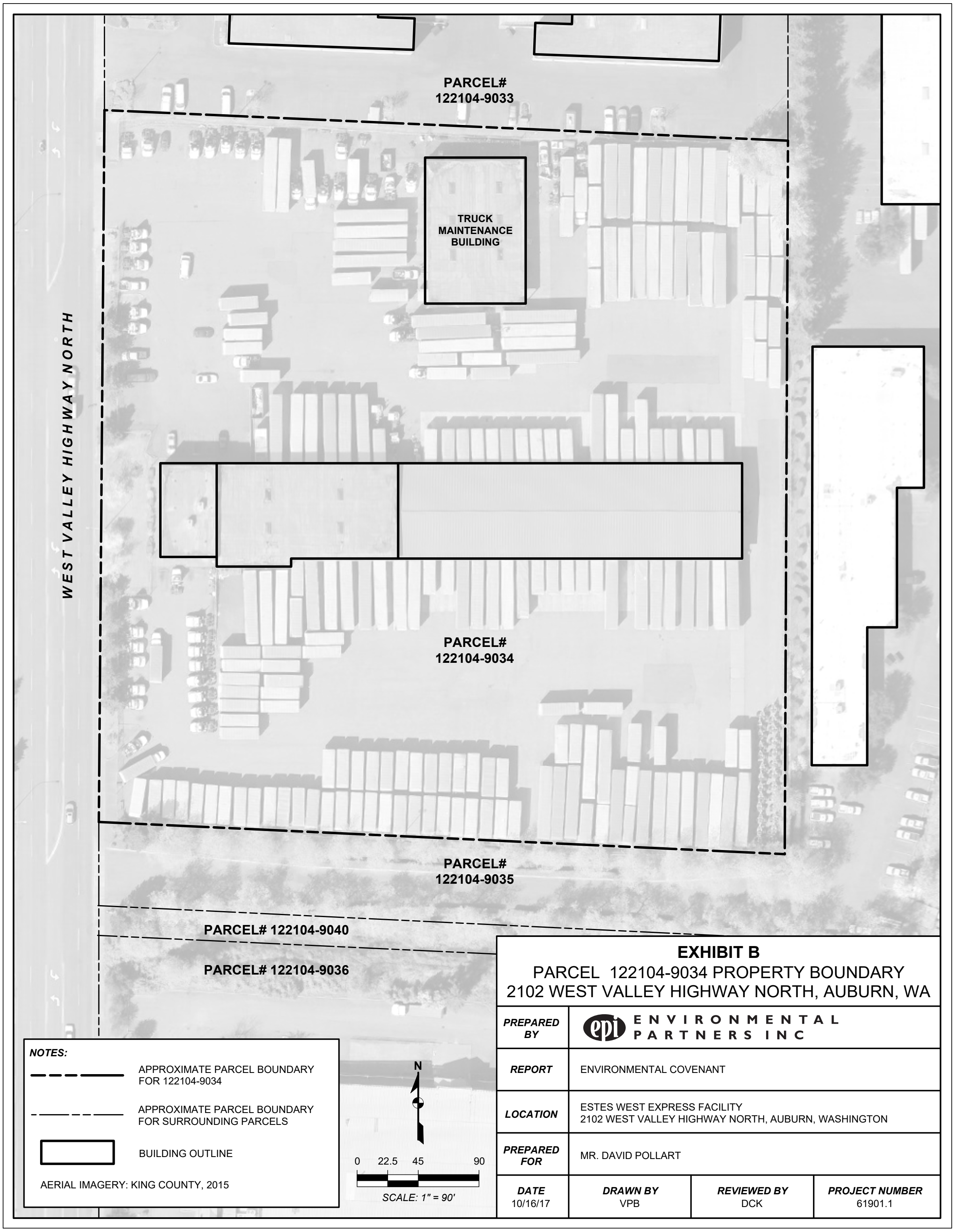


Exhibit C

Map Indicating Location of Restrictions

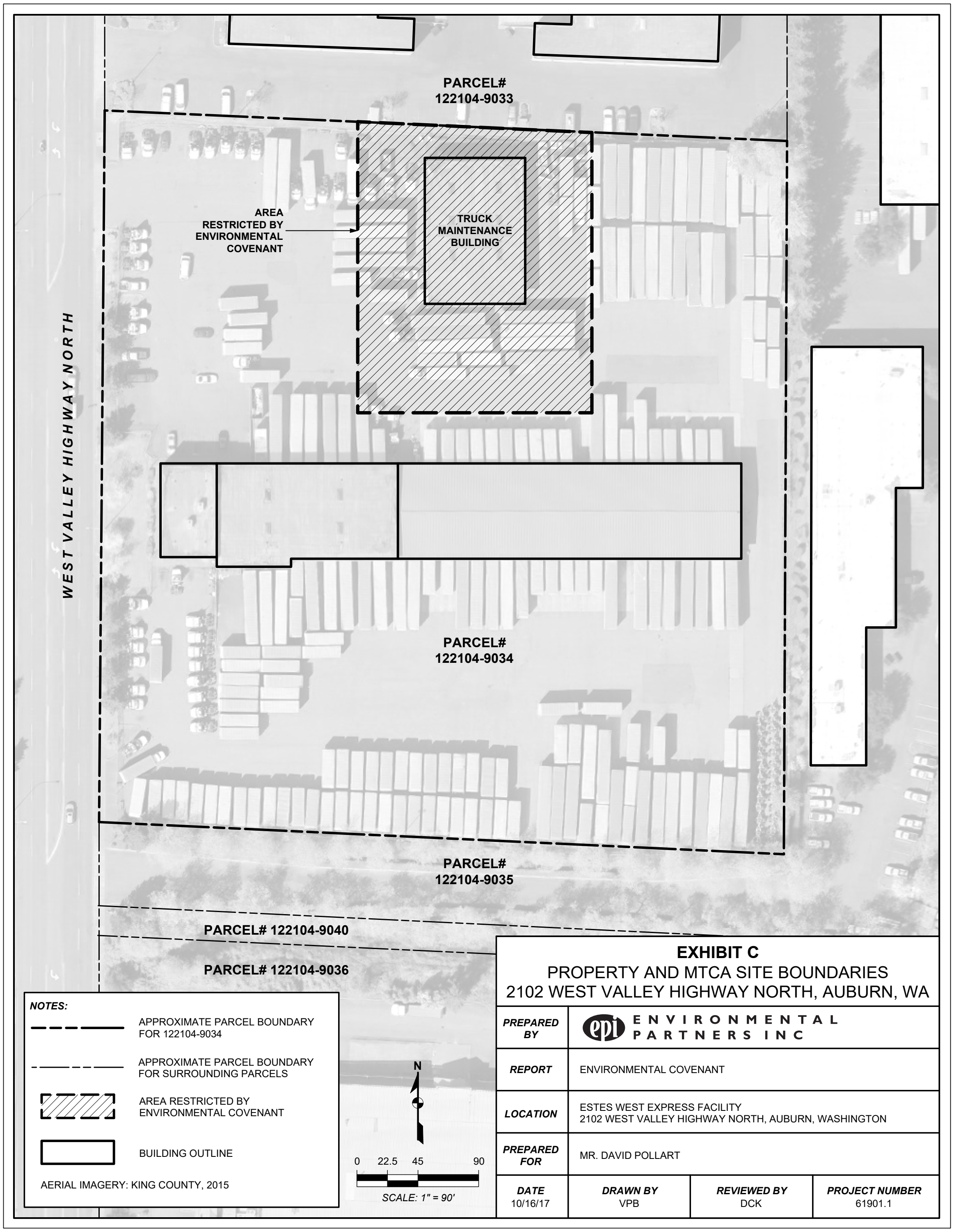


Exhibit D

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That __ [HOLDER'S NAME] __, the owner and holder of that certain __[INSTRUMENT – E.G. EASEMENT/ROW/MORTGAGE/ETC.]__ bearing the date the___________day of [MONTH]__,_ [YEAR]__, executed by __[NAME OF PERSON THAT GRANTED THE INTEREST BEING SUBORDINATED] ___, ___[LEGAL STATUS OF ORIGINAL GRANTOR – E.G. LANDOWNER, CORPORATE OFFICER, ETC.]___, and recorded in the office of the County Auditor of __[COUNTY]__ County, State of Washington, on __[DATE]__, under Auditor's File Number ______________, does hereby agree that said Instrument shall be subordinate to the interest of the State of Washington, Department of Ecology, under the environmental (restrictive) covenant dated ___[DATE]___, executed by ___[NAME OF PERSON SIGNING THIS SUBORDINATION AGREEMENT]_, and recorded in_[COUNTY] County, Washington under Auditor's File Number __________________________.

______________ [SIGNATURE] ___________

by:__________[PRINTED NAME] __________

Title: ________________________________

Dated: _______________________________

Insert one of the following, as applicable. See example format on next page:

INDIVIDUAL ACKNOWLEDGMENT
CORPORATE ACKNOWLEDGMENT
REPRESENTATIVE ACKNOWLEDGEMENT

INDIVIDUAL ACKNOWLEDGMENT

STATE OF ______________________
COUNTY OF ____________________

On this_____________day of_____________, 20__, I certify that ___________________________ personally appeared before me, acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

____
Notary Public in and for the State of Washington [2] Residing at ______________________________
My appointment expires ____

CORPORATE ACKNOWLEDGMENT

STATE OF ______________________
COUNTY OF ____________________

On this ______ day of__________________________, 20__, I certify that ____________________ personally appeared before me, acknowledged that **he/she** is the ____________________________ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

____
Notary Public in and for the State of Washington[2] Residing at ______________________________
My appointment expires ____

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF ______________________
COUNTY OF ____________________

On this ______ day of__________________________, 20__, I certify that ____________________ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the [TYPE OF AUTHORITY] of____[NAME OF PARTY BEING REPRESENTED] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

____
Notary Public in and for the State of Washington[2] Residing at ______________________________
My appointment expires ____

[2] Where landowner is located out of state, replace with appropriate out-of-state title and location.