

Interim Action Work Plan and Data Gap Investigation

**Whitney's Chevrolet, Inc.
123 Pioneer Avenue
Montesano, Washington 98563**


Prepared For:

**Whitney's Chevrolet, Inc.
Caldwell Family Holdings, LLC
Wynoochee Lodge #43, F&AM of Washington
c/o Mr. Clark Davis
Davis Law Office, PLLC
7252 Pioneer Way, Suite 202
Gig Harbor, Washington 98335**

January 12, 2011


Prepared By:

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



Thomas C. Morin, L.G.
Principal Geologist

Thomas C. Morin



Eric L. Caddey, L.G.
Senior Geologist

Project Number: 51201.5

QR  TR 

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Purpose	1
1.2	IA Work Area Locations.....	2
1.3	Legal Description of Property	3
1.4	Site History and Ownership	3
1.5	Previous Investigations/Assessments and Evaluation of Existing Data	4
1.5.1	Fitt Environmental - 1995	4
1.5.2	Department of Ecology - Montesano Ground Water Investigation.....	4
1.5.3	Environmental Partners, Inc. - 2007.....	4
1.5.4	Environmental Partners, Inc. – 2008 to 2010.....	5
1.6	Conceptual Site Model	6
1.7	Contaminants of Concern.....	7
1.8	Identification of Target Analytes	9
2.0	DATA GAP INVESTIGATION	11
2.1	Summary of Data Gaps.....	11
2.2	Data Gaps Investigation Scope of Work	12
2.2.1	Scope of Work to Address Data Gap 1	13
2.2.2	Scope of Work to Address Data Gap 2.....	13
2.2.3	Scope of Work to Address Data Gap 3.....	13
2.2.4	Scope of Work to Address Data Gap 4.....	14
2.2.5	Scope of Work to Address Data Gap 5.....	14
2.2.6	Scope of Work to Address Data Gap 6.....	14
2.3	Data Gaps Project Schedule	14
3.0	IA SCOPE OF WORK	16
3.1	Task 1 – Ecology 30-Day Notice and City of Montesano Right-of-Way Permit.....	16
3.2	Task 2 – Contractor Solicitation and Selection.....	17
3.3	Task 3 – UST Removal and Restoration of Work Area 1	17
3.4	Task 4 – UST Removal and Restoration of Work Areas 2, 3, and 4	19
3.5	Task 5 – Impacted Soils Profiling and Waste Disposal	20
3.6	Task 6 – Remedial Excavation Soil Sampling.....	20
3.7	Task 7 - Preparation of Interim Remedial Action Report.....	22
3.8	IA Project Schedule.....	22
4.0	SAMPLING AND ANALYSIS PLAN	23

4.1	Ground Water Monitoring Well Installation and Sampling Procedures	23
4.1.1	Monitoring Well Installation	23
4.1.2	Monitoring Well Development	24
4.1.3	Monitoring Well Sampling	24
4.2	UST Assessment Soil Samples.....	25
4.3	Remedial Excavation Performance Samples	26
4.4	Investigation-Derived Waste Management	27
4.5	Quality Assurance and Quality Control	27
4.6	Sample Labeling and Chain-of-Custody Protocol	28
4.7	Laboratory Analytical Procedures	28
5.0	HEALTH AND SAFETY PLAN.....	30
5.1	Work Activities and Description	30
5.2	Hazard Description	30
5.3	Personal Protective Equipment	34
5.4	Air Monitoring	34
5.4.1	Inhalation Hazard	34
5.4.2	Fire and Explosion Hazard.....	35
5.5	Exclusion Zone Around Work Locations	35
5.6	Personnel Decontamination and Disposal	35
5.7	Site Control.....	36
5.8	Emergency Response Plan.....	36
6.0	REFERENCES.....	39

Tables

Table 1	Site COPC Screening/Cleanup Levels
Table 2	Work Area Target Analytes For Soil
Table 3	Sampling and Analytical Criteria
Table 4	Potential Chemical Hazards (embedded)
Table 5	Potential Physical Hazards (embedded)

Figures

Figure 1	General Vicinity Map
Figure 2	Site Representation Showing Proposed Monitoring Well Locations
Figure 3	Site Representation With IRA Work Areas, and UST Locations,

- Figure 4 Work Area 1 With UST Location and Proposed UST Assessment Soil Sample Locations
- Figure 5 Work Area 2 With UST Location and Proposed UST Assessment Soil Sample Locations
- Figure 6 Work Area 3 With UST Location and Proposed UST Assessment Soil Sample Locations
- Figure 7 Work Area 4 With UST Location and Proposed UST Assessment Soil Sample Locations
- Figure 8 Project Work Schedule

Attachment

Route Map to Grays Harbor Community Hospital

1.0 INTRODUCTION

1.1 Purpose

Environmental Partners, Inc. (EPI) has completed this *Interim Action Work Plan and Data Gaps Investigation* (IAWP) for the Whitney's Chevrolet facility located at 123 Pioneer Avenue in Montesano, Washington (property). For the purpose of this report, the term "Site" includes the Whitney's property and the impacted areas on and off the property. The general location of the Whitney's Chevrolet property is indicated on Figure 1. The Whitney's "Site" is indicated on Figure 2.

The Site was issued Agreed Order No. DE 2951 (Order) between the Washington State Department of Ecology (Ecology) and Whitney's Chevrolet, Inc.; Caldwell Family Holdings, LLC; and Wynoochee Lodge #43 F&AM of Washington (collectively, the potentially liable persons [PLPs]). The Agreed Order was issued pursuant to the authority of the Model Toxics Control Act (MTCA), Revised Code of Washington (RCW), Chapter 70.105D.050(1). On behalf of the PLPs and in conformance with the Order, EPI performed two rounds of investigation referred to as the Initial Remedial Investigation and the Supplemental Remedial Investigation. The results of the Initial RI and the supplemental RI are described in detail in the *Draft Remedial Investigation Report* (RI Report) dated March 24, 2010 by EPI. During the course of the RI, six underground storage tanks (USTs) were identified as well as soil and ground water impacts that appear to originate from one or more of these USTs.

The IAWP generally documents a proposed scope of services for performing source removal and source control in areas of known impacts as identified in the RI Report as well as an investigation of remaining data gaps necessary to provide a fuller understanding of the extent of environmental impacts. The scope of services for the data gaps investigation is based upon the findings of the RI Report and upon comments contained in Ecology's letter titled *Whitney's Chevrolet Draft RI Report Comments* (Ecology Comments) dated September 30, 2010. A formal response to the Ecology Comments is provided under separate cover.

The letter requested several changes to the RI Report as well as requested that several data gaps presented be addressed. A response letter detailing action items for each of Ecology's comments has been submitted under separate cover. This document includes a summary of the interpreted data gaps that are presented in Ecology comment letter as well as provides a proposed scope of work to address these data gaps.

The purpose of the interim actions (IAs) proposed herein is to perform source removal and source control at the locations of the USTs identified as UST-1 through UST-6 in the RI Report. Three of these USTs are located outside of the Whitney's building in South First Street and in the sidewalk. The other three USTs are located inside the Whitney's Chevrolet building except for small portion of UST-4, which extends beyond the western exterior wall of the Whitney's Chevrolet building beneath the adjacent sidewalk. These USTs are suspected sources of petroleum hydrocarbon-related impacts observed in soil and ground water during the RI.

The IAs proposed herein are not identified as a necessary or required task within the The Order. However, based upon the findings and conclusions of the RI Report the IAs are deemed by the PLPs to be both necessary and prudent and will provide a significant benefit to the environment if performed in advance of the Feasibility Study (FS). These IAs were initially proposed to Ecology by the PLPs during a series of telephone conversations and electronic mail exchanges in June 2010. The PLPs proposed the IAs with the understanding that any final remedial action selected by the pending FS would have a component of source control and that earlier source control would result in more rapid improvement in environmental quality at the Site.

The Order requires a Remedial Investigation and Feasibility Study (RI/FS). However, the proposed IAs target source removal and source control, which are prudent, reasonable, and necessary to limit ongoing environmental impacts. The Model Toxics Control Act (70.105D RCW) and its implementing regulation (WAC 173-340) recommend source control to the maximum extent practicable. After the source removal activities are completed, they will be followed by a reasonable ground water performance monitoring which will assess the beneficial effects of the IAs. An FS will then be prepared based on the findings of all the remedial actions and assessment activities completed to date. It is the PLPs understanding that Ecology and the AAG will amend the Order to include the IA activities presented herein.

This IAWP, while not currently required under the Order, is being submitted to Ecology in good faith for review and comment prior to implementation. Upon receipt of comments from Ecology, EPI will prepare a final IAWP. Upon acceptance of the Final IAWP and completion of amendments to the Order, EPI will conduct the IA and the data gaps investigation activities. It is understood that other actions such as City of Montesano permitting, a threshold determination of non-significance (DNS) under the State Environmental Policy Act (SEPA), and public notice are required prior to IRAWP implementation. Upon completion of these actions the PLPs will prepare a Draft IA and data gaps investigation report presenting the results of the IAs and the current level of understanding of site conditions, which will augment the prior findings of the RI Report. At that time it will be possible to begin the process of preparing a FS that considers the residual impacts that cannot be readily addressed by source control activities.

1.2 IA Work Area Locations

The IA work areas are situated inside the Whitney's Chevrolet facility building and in the adjacent sidewalk and city street (South First Street) to the northwest. The Whitney's Chevrolet facility is currently utilized as an automobile dealership, repair facility, and parts sales office. Access to the facility is via West Pioneer Avenue from the north, and from South First Street to the west. Current property features and structures are depicted in Figure 2.

Each of the USTs, or groups of USTs, is identified with a Work Area. UST-1, UST-2, and UST-3 are in Work Area-1, UST-4 is in Work Area-2, UST-5 is in Work Area-3, and UST-6 is in Work Area-4. Collectively, the four work areas will generally be referred to as the IA Work Area. The location of each Work Area is depicted on Figure 3, and a detailed view of each Work Area is depicted in Figures 4 through 7.

Work Area-1 is located on the northwest exterior corner of the Whitney's building and consists of UST-1, located in South First Street, UST-2 located in the sidewalk, and UST-3 located in the sidewalk south of UST-2. Work Area-1 will most likely have to be completed separately from the other work areas due to the logistics of excavating in the city street and sidewalk areas. The location of Work Area-1 is depicted on Figure 4.

Work Area-2 is located in the west-central portion of the building and consists of UST-4 that is located in an access ramp to the repair shop. This area is situated in the machine shop and repair shop portions of the Whitney's facility and includes a portion of the sidewalk west of the building. The location of Work Area-2 is depicted on Figure 5.

Work Area-3 is located in the central portion of the building and consists of UST-5 that is located in a mechanics bay. The location of Work Area-3 is depicted on Figure 6.

Work Area-4 is located in the central-east portion of the building and consists of UST-6 that is located partially in the paint booth, and extends partially under the wall to the auto parts storage room. The location of Work Area-4 is depicted on Figure 7.

Work within Work Area-2 through Work Area-4 will be performed in a manner that limits disruption to the active Whitney Chevrolet facility. It is currently anticipated that each work area will be excavated and backfilled prior to excavation of a new area.

1.3 Legal Description of Property

According to Grays Harbor County Assessor records, the legal descriptions of the parcels associated with the IA Work Area are:

- 123 West Pioneer Avenue, Parcel #072000201101: C N BYLES W 48 OF LOTS 11 & 12 BLK 2. Parcel owned by Wynoochee Lodge #43.
- Parcel #072000200500: C N BYLES S ½ OF LOT 4 LS 10' FOR ST; LOTS 5-9 INC LS ST; LOT 10 & E 72 OF LOTS 11 & 12 BLK 2. Parcel owned by Caldwell Family Holdings, LLC.
- South First Street, Pioneer Avenue, and South Main Street Right-of-Ways; Owned by City of Montesano.

1.4 Site History and Ownership

Information pertaining to Site history and ownership has previously been described in detail in the *Draft Remedial Investigation Report*, dated March 24, 2010. The reader is directed to this document for additional information.

1.5 Previous Investigations/Assessments and Evaluation of Existing Data

Several previous investigations that are relevant to the Whitney's Chevrolet facility have been conducted since 1995. A brief review of each report is presented below. The reviewer is directed to the source documents for additional detail.

1.5.1 Fitt Environmental - 1995

In an August 28, 1995 report Fitt Environmental, Inc. reported on a site assessment, soil sampling, and underground storage tank decommissioning at 123 West Pioneer Avenue, Montesano, Washington. This work consisted of limited site assessment and some tank decommissioning activities. On August 8, 1995, six boreholes were drilled near and into the UST tank pit located at the northwest corner of the property (Work Area-1). No ground water was encountered, but visible soil discoloration and strong petroleum odor were detected in five of six boreholes. Six soil samples were collected: one from each borehole at 15 feet below ground surface (bgs); and one at 5 feet bgs beneath the dispenser island. Three of the six soil samples contained gasoline-range petroleum hydrocarbons (GRPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) compounds at concentrations above the MTCA Cleanup Levels in effect at the time. The three empty gasoline tanks (4,000, 6,000, and 12,000 gallons) were reported closed in-place in August 1995. EPI was not able to review the full documentation for this closure.

1.5.2 Department of Ecology - Montesano Ground Water Investigation

In 2004, Ecology began the Montesano Ground Water Investigation, which is area-wide investigation intended to determine the extent of previously identified ground water contamination underlying the City of Montesano. Ecology contracted GeoEngineers to assist with this investigation in 2005. Ecology concluded, based upon the GeoEngineers investigations and subsequent investigations by Ecology's Ms. Pamela Marti, that the sources of petroleum impacts to the shallow aquifer were the following:

1. Tony's Short Stop/Grays Harbor Grange
2. Whitney's Inc./Key Bank (Sterling)
3. Brumfield-Tidwell

Additional ground water monitoring wells were installed in the area of investigation and routine monitoring of wells situated throughout the area of investigation is ongoing by Ecology. The results of the investigations are documented in periodic Ecology publications. *Montesano Ground Water Investigation of Leaking Underground Storage Tanks October 2007 and April 2008* (Ecology, 2009), dated February 2009 by Ecology is the most recent of these publications.

1.5.3 Environmental Partners, Inc. - 2007

On behalf of the PLPs, EPI conducted a "*Phase I Environmental Site Assessment and Supplemental Historical Review*" of the Whitney's location, dated February 14, 2007 (EPI, 2007). The assessment

indicated that Whitney's Chevrolet is listed on several regulatory databases and is a "confirmed contaminated site" on the Hazardous Sites List with a rank of 3.

1.5.4 Environmental Partners, Inc. – 2008 to 2010

On behalf of the PLPs and based upon the findings of the *Phase I Environmental Site Assessment*, EPI conducted an Initial RI and then a Supplemental RI of the Whitney property in accordance with Agreed Order No. DE 2951. The initial RI characterized soil and ground water impacts at the 1101 parcel and on the western portion of the 0500 parcel, and the Supplemental RI characterized the remainder of the Whitney's Site. Data obtained from the remedial investigations were used to develop the scope of work for this IRAWP. The remedial investigations are described in detail in the *Draft Remedial Investigation Report* (EPI, 2010) dated March 24, 2010. It is important to note that use of the term "Whitney's property" in the following conclusions from the RI report refers to the portion of the property on which the Work Areas are situated. The RI's conclusions included, but were not limited to, the following:

- The Initial RI and Supplemental RI have served to meet the substantive requirements of WAC 173-340-350(7) and have completed the remedial investigation of the Site. The Site has been sufficiently characterized to allow for development and evaluation of cleanup action alternatives. While some data gaps remain, those data gaps are not sufficient to preclude the evaluation of remedial alternatives and additional site characterization activities "...*may be integrated with the development and evaluation of [remedial] alternatives...*" as indicated in WAC 173-340-350.
- Soil at the Site is impacted with a range of petroleum hydrocarbons and related compounds. These compounds include GRPH, ORPH and various fuel-related volatile compounds such as benzene. Soil impacts also include lead. These impacts appear to be related to a long history of retail fuel sales and vehicle service and maintenance. The source of these impacts appears to be both USTs and surface releases. Soil impacts appear to be limited to the northern portion of the Whitney's Chevrolet facility, beneath the on-site building and the right-of-way at the northwestern corner of the Site.
- The residual impacts to soils are likely an ongoing source of impacts to ground water and result in the current extent of the dissolved-phase plume. Addressing these residual soil impacts through the implementation of a targeted Interim Remedial Action is likely to provide substantial benefit to ground water quality by removal of source soils. It may be appropriate to implement interim remedial measures and some performance monitoring prior to undertaking the Feasibility Study process.
- Ground water at the Site is impacted primarily with GRPH, benzene, and related compounds. The observed ground water impacts appear to originate from the on-site USTs. There appear to be at least two, and possibly three, source areas for ground water impacts. These source areas include UST-2, UST-6 and potentially UST-5.

- Petroleum hydrocarbon impacts to ground water have been well characterized by the RI activities. These impacts extend from near the intersection of West Pioneer Avenue and South First Street hydraulically down-gradient to the northern portion of the Tony's Short Stop Site.

1.6 Conceptual Site Model

The following Conceptual Site Model (CSM) is based upon the current understanding of the Site as characterized by the Initial and Supplemental RI activities. While some data gaps may remain, the RI activities have served to generally characterize the limits of impacts and the potential exposure pathways posed by those impacts.

The contaminants of potential concern (COPCs) at the Site are those commonly associated with hydrocarbon fuels and vehicle maintenance activities. These impacts appear to originate primarily in the areas of out-of-service USTs on the Whitney's Chevrolet facility. This is consistent with the long history at the Whitney's Chevrolet facility for vehicle maintenance and retail fuel sales. Soil impacts include both shallow and deeper soils near the static water table.

Shallow soil impacts contain a mixture of lighter- and heavier-range hydrocarbons ranging from gasoline-range to oil-range. The shallow impacts are likely related to minor spills or releases over time to either a historic unpaved surface or infiltration through cracked concrete or asphalt. Some lead is also present in soil, which, based upon the observed concentrations, is likely also related to vehicle maintenance rather than leaded fuels. Some soils near the out-of-service USTs contain deeper impacts suggestive of a release.

The extent of COPCs in soil at the Site appears to be generally limited to the Whitney's Chevrolet facility and in soils immediately west of the facility near the historic USTs in South First Street. These USTs may have once been located within privately owned property and were at some point made a part of the right-of-way through roadway widening.

There appear to be at least two, and potentially three, source areas for petroleum hydrocarbon impacts to ground water. The most up-gradient release area is near the three USTs at the northwestern corner of the site. It appears from the data that the primary source of this release is the two easternmost USTs. It also appears likely that there are separate areas of release in the central interior of the northern portion of the site near the UST at boring DPT-5 and another potential source area in the vicinity of borings DPT-8 through DPT-11. This finding of likely multiple source areas is confirmed by sampling and analysis of the monitoring wells.

The releases from the USTs then migrated vertically through the relatively permeable unsaturated zone soils down to the water table that is present at a depth of about 16 feet below grade. Analytical data for soil suggest the presence of a smear zone near the USTs, which is likely serving as a source of ongoing dissolution of petroleum hydrocarbons to ground water. The mode of release near the USTs is not known and could include historic overfilling/spillage, UST leakage, or product line leakage.

It is important to note that the soil at the Site does not contain non fuel-related volatile organic compounds (VOCs) such as tetrachloroethene (PCE) or trichloroethene (TCE). This finding counters anecdotal information in the record that suggests that paint solvents and wastes were disposed to the surface of the site. The source of PCE observed at the Site is not fully understood and does not currently appear to be associated with historic on-property activities or the USTs. There is the potential for an off-site contribution of PCE from the northwest, which is hydraulically upgradient of the Site.

As with soil, the primary COPCs in ground water are fuel-related. The primary COPCs in ground water GRPH and the associated aromatic fuel hydrocarbons: benzene, toluene, ethylbenzene, and total xylenes. Naphthalenes and trimethylbenzenes are also associated with gasoline fuels, particularly historic fuels before the advent of reformulated fuels in the mid-1960s. The presence of lead and potential presence of 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC) may also be associated with historic gasoline fuels. EDB was a common historic octane booster and EDC is a common historic lead scavenger in gasoline fuel. The presence of these compounds appears to suggest historic fuel releases. It should be noted that EDB and EDC were not detected in samples from ground water monitoring wells and they are not yet considered COPCs for the Site.

Ground water at the site also includes the COPC PCE. PCE is commonly thought of as dry cleaning solvent but is also a common degreaser and may be found in various automotive fluids at varying concentrations. It is important to note that while PCE is present in ground water, it is not present in any soil samples near any potential sources of release at concentrations exceeding the MTCA Method A Soil Cleanup Level. The highest concentration of PCE in soil gas is in a location at the northwest corner of the intersection of West Pioneer Avenue and South First Street, up-gradient of the Whitney's Chevrolet facility. The source of PCE at the Site has not yet been established and the potential exists for an off-Site source of PCE.

Potential exposures at the Site are limited to site workers either through direct contact or impacts to indoor air quality. Direct contact exposure is limited to soil in the potential areas of release. The potential for such exposures is highly limited since the area of soil impacts is paved either with asphalt or concrete. This condition would limit exposure to construction/maintenance workers performing above grade work in the areas of shallow soil impact. Direct exposure to ground water is considered highly unlikely since the water table is greater than 15 feet below grade. The known extent of the dissolved-phase plume does not affect any water supply wells for the City of Montezano.

1.7 Contaminants of Concern

Based on data obtained from previous investigations, COPCs for soil were identified as those compounds that have been detected at concentrations exceeding a MTCA Method A or Method B Soil Cleanup Level for Unrestricted Land Uses. Selected Site COPCs cleanup levels in soil and ground water are summarized in Table 1.

The MTCA Method A or Method B Table Values do not take into account specific Site exposures and make conservative assumptions regarding receptors such as the assumption of a residential juvenile exposure, which are likely not appropriate for the Site. Actual site-specific cleanup levels and/or

remediation levels consistent with appropriate MTCA standards may be developed in the future once the extent of impacts has been fully characterized. Cleanup level development may also include considerations of the reasonable maximum exposures expected at the site and the use of institutional controls, environmental covenants, and engineering controls.

Ultimately, only those compounds that exceed an actual final site cleanup level will be identified as contaminants of concern (COCs). Development of final cleanup levels and identification of COCs will be performed during the Feasibility Study process and during development of a final Cleanup Action Plan (CAP) for the site.

COPCs for soil at the Site have been identified based on comparison to the MTCA Method A or Method B Soil Cleanup Level for Unrestricted Land Uses. The COPCs for soil at the site include the following:

- ORPH
- GRPH
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes
- Naphthalenes
- Lead

Methylene chloride was also detected in soil at a concentration exceeding a MTCA cleanup level during the Initial RI. However, methylene chloride is a common laboratory solvent and contaminant and its presence in soil samples at trace concentrations is not considered indicative of actual site conditions.

A variety of non-chlorinated VOCs were detected in soils, which do not have MTCA Method A or Method B cleanup levels. These compounds are common petroleum fuel compounds and are regulated under MTCA as components of GRPH. As such, these compounds do not individually constitute COPCs for soil.

It is important to note that PCE has not been detected in any soil samples at the Site at a concentration above the MTCA Method A Soil Cleanup Level.

Based on data obtained from the previous investigations, COPCs for ground water were identified as those compounds that have been detected at concentrations exceeding the MTCA Method A Cleanup Levels for ground water as a source of drinking water. The COPCs identified in the ground water at include:

- GRPH
- Benzene
- Toluene
- Ethylbenzene

- Total Xylenes
- PCE

Based upon data obtained from previous investigations, COPCs for indoor air were identified as those compounds that were detected during the RI at concentrations exceeding a MTCA Method B indoor air cleanup level based upon a residential exposure scenario. The COPCs for indoor air include:

- GRPH
- 1,3 - Butadiene
- Naphthalenes
- 1,2,4 - Trimethylbenzene
- Benzene
- Ethylene Dichloride (EDC)
- Total Xylenes
- Chloromethane
- 1,4 - Dichlorobenzene
- PCE
- Trichloroethylene (TCE)

There are no COPCs for sediments or surface water since an exposure pathway for migration from the Site to nearby surface water or sediment does not currently exist

1.8 Identification of Target Analytes

Analytical data obtained during the RIs indicated that soil impacts in the vicinity of USTs were associated with the use of the UST and, therefore, the nature of soil impacts varied within each work area.

Target analytes were selected for each work area for the purpose of assessing soil impacts and guiding remedial excavation during the IA. Target analytes differ from COPCs in that they include compounds that were detected during the RI in the vicinity of the work area at concentrations either above or below MTCA Method A or B Soil Cleanup Levels. Target analytes also include COPCs for ground water that were either detected in soil or not analyzed in soil during the RI in the vicinity of a work area. Target analytes do not include compounds that were not detected above compound-specific laboratory detection limits in soil during the RI. Selected cleanup levels for target analytes in soil for this IA are summarized in Table 2.

Target analytes in soil in Work Area-1 include the following:

- ORPH
- GRPH
- Benzene
- Toluene
- Ethylbenzene

- Total Xylenes
- PCE
- Total Lead

Target analytes in soil in Work Area-2 and Work Area-3 include the following:

- ORPH
- DRPH
- GRPH
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes
- PCE
- Total Naphthalenes
- Total Lead

Target analytes in soil at Work Area-4 include the following:

- ORPH
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes
- PCE
- Total Naphthalenes
- Total Lead

Analytical data obtained during the RI indicated that the ground water impacts are generally the same across the site. The target analytes for the ground water include the following:

- GRPH
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes
- PCE

2.0 DATA GAP INVESTIGATION

The Draft RI report identified some remaining data gaps in the characterization of the extent of impacts at the Site. Additionally, the Ecology Comments presented gaps in the Site characterization that Ecology sought to have addressed. A summary of the identified data gaps and the associated proposed scope of work to address them is included in the following sections.

2.1 Summary of Data Gaps

Table 1 includes a summary of the six currently identified data gaps at the Whitney Chevrolet Site:

Table 1
Summary of Current Data Gaps
Whitney Chevrolet Site
Montesano, Washington

Data Gap		Area of Site	Resolution
1	Potential commingling plumes between Whitney's and Tony's Short Stop "Sites"	Southern end of plume, on Tony's Short Stop property	Install and sample two ground water monitoring wells to demonstrate separate plumes. See Section 2.2.1.
2	GRPH as a COC in air	Interior of buildings	Calculate site-specific cleanup level for GRPH in indoor air using "MTCATPH11.1" and compare the relative toxicity to that of known COCs for air (e.g., PCE, benzene, etc.). See Section 2.2.2.
3	Up-gradient extent of the dissolved-phase hydrocarbon plume to the northwest of the Whitney's Chevrolet facility has not been fully characterized	Northwest of Whitney's Chevrolet building.	Install and sample a total of four additional ground water monitoring wells; two in South First Street and two in West Pioneer Avenue. See Section 2.2.3.
4	Identification of potential off-property source of PCE impacts	South First Street	Sample ground water from the two newly installed wells in South First Street and analyze for PCE. See Section 2.2.4.
5	Indoor air quality at the Post Office	US Post Office Building	Perform Johnson and Ettinger (J&E) Modeling for US Post Office building and analyze results of soil gas in comparison to results of the J&E Model. See Section 2.2.5
6	Potential USTs and VOC sources at the Whitney's Repair shop	Whitney's Repair Shop (north of west Pioneer Avenue)	A site reconnaissance and interview with site operators shall be conducted and documented. See Section 2.2.6

2.2 Data Gaps Investigation Scope of Work

The scopes of work presented below detail the methods that will be utilized to address the data gaps identified above. The scopes of work are subject to modifications based upon field conditions that may differ from those conditions anticipated based upon current data. Although every attempt has been made to anticipate environmental conditions, it is possible that the planned tasks will require adjustment during field activities to meet the project objectives. If and when modifications to the work plan occur,

the rationale for such modifications will be recorded and a written record of the revisions will be provided to Ecology in the *Interim Actions and Data Gaps Report* (IADG Report).

Unless otherwise stated, all proposed monitoring wells will be installed in accordance with WAC 173-160 *Construction and Maintenance of Wells* under the supervision of a licensed well driller and a licensed geologist or professional engineer. All sampling and analysis of wells will be performed using low-flow sampling techniques. Section 4 of this document provides additional detail regarding specific field techniques.

2.2.1 Scope of Work to Address Data Gap 1

Two additional ground water monitoring wells will be installed in the southeast corner of the site on the Tony's Short Stop property. The Draft RI was able to determine that the releases from the Site extended onto the Tony's Short Stop Site. However, the prior work was not able to differentiate between impacts associated with the more distal sources from the Whitney's Chevrolet Site from the LNAPL and other releases originating on the Tony's Short Stop Site. The two proposed wells (proposed locations shown as KBMW-11 and KBMW-12 on Figure 2) will assist in segregating the downgradient extent of petroleum hydrocarbon impacts originating the Whitney's plume from the impacts associated with the on-property releases at the Tony's Short Stop Site. These wells will also be used as a component of the performance ground water monitoring network to assess the effectiveness of both the IA's and the ultimate remedial alternative implemented after approval of the FS and the cleanup action plan.

The proposed locations are anticipated to be appropriate to meet the project objectives. However, actual monitoring well locations may differ from those presented herein based on actual field conditions and on access approval from Tony's Short Stop.

2.2.2 Scope of Work to Address Data Gap 2

Although the original RI work plan, as approved by Ecology, did not list GRPH as a COPC in air, EPI will review the indoor air sample data collected to date and make a recommendation on whether or not GRPH analysis of the indoor air is warranted. It must be recognized that there is not an approved method for GRPH analysis in air. This review will include calculating the site-specific cleanup level for GRPH for indoor air using "MTCATPH11.1 and comparing the results with the relative toxicity to that of the known COCs for air (e.g., PCE, benzene, ethylbenzene etc.). With Ecology's review and approval, a remedial Indicator Hazardous Substance (IHS) may be selected from the data reviewed and will be used to measure the performance of remedial actions taken to address indoor air quality.

2.2.3 Scope of Work to Address Data Gap 3

EPI will install four additional ground water monitoring wells in the northwest corner of the Site. Two of these wells (proposed locations shown as WCMW-7 and WCMW-8 on Figure 2) will be located on the west side of South First Street. The third well (proposed location shown as WCMW-9 on Figure 2) will be installed in the parking lane in the northwest corner of South First Street and West Pioneer Avenue.

The fourth well (proposed location shown as WCMW-10 on Figure 2) will be installed in Pioneer Avenue in front of the Whitney's Repair Shop to determine the northern extent of the petroleum hydrocarbon impacts and to determine if the Whitney's Repair Shop is a contributing source to the ground water impacts.

The proposed locations are anticipated to be appropriate to meet the project objectives. However, actual monitoring well locations may differ from those presented herein based on actual field conditions and right-of-way approval from the City of Montesano. .

2.2.4 Scope of Work to Address Data Gap 4

Ground water samples collected from the newly installed wells WCMW-7 through WCMW-10, described in Section 2.2.3 above, will also be analyzed for PCE using appropriate methods (see Section 4.7). The location of these wells will provide data points that will assist with determining if there is an additional up-gradient source for the PCE to the northwest. The new wells will be sampled during the sampling event described in Section 2.2.1, which will include all wells at the Site. The resulting data will be presented as isoconcentration contours on an appropriate Site figure.

2.2.5 Scope of Work to Address Data Gap 5

EPI will review the soil gas data obtained during the RI activities to determine if indoor air sampling at the Post Office located on the west side of South First Street is warranted. EPI will review the data using the J&E Model based on site-specific conditions and a non-residential exposure assumption.

2.2.6 Scope of Work to Address Data Gap 6

EPI will conduct a site reconnaissance and also interview personnel familiar with the Whitney's Repair Shop building to determine if USTs or sumps are located at the facility. The reconnaissance will include a visual inspection of the facility, and in particular, an inspection for vent pipes, fill ports, and floor drains. EPI will also review available historical records to assist with determining if USTs or sumps were historically located on or used at the facility. EPI will document the findings of the interviews and site reconnaissance.

If deemed necessary, EPI will conduct an electromagnetic survey that will consist of using a hand held magnetic wand that can detect large metal objects down to a depth of approximately 5 to 7 feet bgs. The hand-held wand will be used in the shop area and along the outside areas of the building including the sidewalks. The exterior of the building will also be visually inspected for fill pipes, drains, and vent lines.

2.3 Data Gaps Project Schedule

A project schedule for the data gaps tasks is presented on Figure 8. The schedule is presented as elapsed time (*i.e.*, it is not linked to a defined start date). As noted above, and as previously stated by Ecology, implementation of the interim actions will require a modification to the existing Agreed Order

and will require a period of public comment. The timeframes for these actions are beyond the control of the PLPs.

Upon completion of the revised Agreed Order, completion of the public comment process, and Ecology approval of a final IAWP EPI will simultaneously start preparation of the required documents for the City of Montesano Right-of-Way Permit for both the data gaps drilling and the IA, and start negotiations with Tony's Short Stop for installation of monitoring wells on their site. Upon approval of the final IAWP and permission to proceed, EPI can provide Ecology with an updated project schedule that more accurately reflects the actual project timeline.

It is estimated that approximately 8 weeks will be necessary to complete the data gaps activities. These activities may or may not be performed simultaneously with the interim action excavation activities. It is currently anticipated that a Draft IADG Report will be prepared. However, if the interim actions and data gaps investigation tasks are staggered it may be necessary to provide separate deliverables. If the work cannot be performed simultaneously, EPI will discuss with Ecology an appropriate mechanism for data delivery and reporting.

3.0 IA SCOPE OF WORK

The purpose of detailing the proposed scope of work is to identify methods that will be utilized to perform the IA. This outlined scope of work is subject to modifications based upon field conditions that may differ from those conditions anticipated based upon current data. Although every attempt has been made to anticipate environmental conditions, it is possible that the planned tasks will require adjustment during field activities to meet the project objectives. If and when modifications to the work plan occur, the rationale for such modifications will be recorded and a written record of the revisions will be provided to Ecology in the IADG Report.

The remedial objective for this IA is to excavate all reasonably accessible soils that contain the target analytes identified in Section 1.8 at concentrations exceeding Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. In the case of the target analytes, MTCA Method A soil cleanup levels are considered protective of ground water quality to a drinking water standard and attainment of those cleanup levels is considered fully protective of human health and the environment. The MTCA Method A soil cleanup standard has been selected for this IA presumptively and is considered very conservative. The use of the MTCA Method A standard for this IA does not preclude the potential later development of site-specific cleanup levels or remediation levels for soil or ground water using the MTCA Method B standard.

3.1 Task 1 – Ecology 30-Day Notice and City of Montesano Right-of-Way Permit

EPI will prepare and submit a 30-Day Notice of Intent to Close form to Ecology. Although five of the USTs were reportedly closed in-place in the past, submittal of the 30-Day Notice is still required for the UST that is inactive but not yet formally closed (UST-6). The decommissioning activities will be scheduled after the notice has been returned and date stamped by Ecology. Fieldwork can begin 30 days after the day listed on Ecology's date stamp.

The City of Montesano Public Works Department will be contacted regarding right-of-way permit requirements for excavating in South First Street, and removing portions of the concrete sidewalk in WA1. The City of Montesano, in prior discussions, has indicated that permitting for this work will not be extensive, but that the permit will most likely include a street and sidewalk closure plan, traffic control plan, and engineering details regarding the placement and compaction of fill material, replacement of street pavement, and replacement of the concrete sidewalk and curb. A geotechnical engineer or structural engineer will be consulted for those portions of the work conducted near building foundations or within the building.

The Montesano Fire Department and Grays Harbor County will be contacted for determination of permit requirements (if any). EPI will also contact the local power company to determine the requirements for requesting that the power pole adjacent to UST-3 be relocated.

3.2 Task 2 – Contractor Solicitation and Selection

EPI will solicit bids from three Washington Certified UST Decommissioning contractors for excavating, UST removal, soils disposal, and restoration activities for each of the work areas. EPI will prepare a contractor Scope of Work and perform a site walk with the three contractors. After receipt of the contractor bids, EPI will review the bids and make a recommendation to the Client.

3.3 Task 3 – UST Removal and Restoration of Work Area 1

Prior to performing any intrusive work, EPI will make all reasonable efforts to ensure that no active underground utilities are present in the WA or, if present, to protect that utility during the work. This is necessary to prevent potential injury to workers and potential damage to the utilities and disruption to the on-site business. The public utility notification center will first be contacted for locating and marking any public utilities in areas outside of the Whitney's building. In addition, a private utility locating service will be utilized to locate non-public utilities that may be located inside each of the WAs.

A power pole in Work Area-1 is located directly adjacent to the west side of UST-3 and provides power to the Whitney's building and the United States Post Office located on the west side of South First Street. EPI will contact the local power company to determine their requirements for either moving or supporting the pole or temporarily rerouting power. If it is not possible to mitigate risks to the pole or power supply, then EPI will only excavate soils on the north end of the UST to remove any obvious soil impacts and to field screen and collect soil samples. Protection of the power pole will become a limiting factor in the soils to be remediated in the area of UST-3.

As noted above, EPI will obtain necessary permits from the city of Montesano prior to beginning of work. EPI will then coordinate with a traffic control contractor for traffic diversion and/or road closure. The Montesano Fire Department will be notified of the UST decommissioning schedule and may be present for UST decommissioning activities. Ecology personnel will also be notified at least two weeks prior to UST decommissioning.

Ground water monitoring well WCMW-1 is located between UST-1 and UST-2 and would most likely be damaged during the excavating activities. Therefore, EPI will coordinate with a Washington State Licensed well driller to decommission the well prior to excavating, and then re-install the well after the USTs are removed.

A temporary stormwater diversion dike will be installed up slope from the excavation prior to start of the excavating activities. The dike will divert stormwater from the street gutter around the excavation to prevent silt from entering the storm water system. As a precaution, an additional dike and hay bales will be placed in the street gutter below the excavation to stop and settle out fine particles that may have entered the stormwater flow. If soils appear to be dry during excavating, then the excavated soils will be wetted with a hose for dust control purposes. Additional storm water mitigation may be required by the City of Montesano as a component of the proposed work.

The UST decommissioning contractor will then saw cut and remove the asphalt and concrete sidewalk above the USTs at the location on Figure 4. The asphalt and concrete will be disposed of off-site. The tops of the USTs will be uncovered and the USTs will be visually inspected to confirm that they were previously filled in-place. EPI will then review the condition and contents of the UST with the contractor to determine the most practical method for removing the USTs and contents. A geotechnical engineer may also be present to assist with determining the integrity of the sidewalls of the excavation and to determine if shoring is required to prevent undermining of the adjacent roadway and building.

EPI's Certified UST Site Assessor will be on-site to collect UST assessment soil samples per Ecology's UST closure requirements as described in Section 2.6

If liquid is encountered in any of the USTs, the contractor will transfer the liquid from the UST into a 55-gallon drum for temporary on-site storage until appropriate disposal arrangements are made. EPI will also collect a sample of the liquid and submit this sample for the analysis of target analytes deemed appropriate for the WA and any analysis required by the disposal facility in order to accept the waste.

If necessary, a Marine Chemist will inert the UST utilizing an inert gas such as carbon dioxide. Once the Marine Chemist verifies that the UST is inert, certificates will be issued indicating that the UST is "Safe for Transport" and/or "Safe for Cutting". Copies of these certificates will be provided to the EPI on-site Project Manager.

The location of any product piping, if present, is currently unknown. If found, piping will be removed to the concrete cut and then capped. After removal from the excavation, the USTs will be transported off-site for destruction. UST destruction certificates will be provided by the contractor.

Prior to backfilling, EPI will review the analytical data from the performance sampling (Task 6 below) to determine if inaccessible residual soil impacts will remain in place. If soils containing contaminant concentrations above the target cleanup levels will remain, then EPI may elect to install vertical and possibly horizontal PVC piping and screen within the excavation. This piping may include a network of horizontal piping within the bottom of the excavation for future use. Future uses could include air sparging, bioventing, introduction of bioaugmentation media or chemical oxidation media, or as ground water extraction wells. The design and layout of such a system will be based upon the field data and the location and orientation of the residual impacts. Such piping will most likely consist of two-inch or four-inch diameter Schedule 40 PVC. Screened intervals will be machine slotted and screened across appropriate intervals based upon the available data. The cost of installing such a network of pipes during the IRA excavation is incrementally very small and eliminates the potential need for installation of piping in the future or for drilling potentially less effective vertical wells within the impacted areas. Horizontal piping would be manifolded to one or more vertical riser pipes that would be day-lighted inside a flush-mounted, traffic-rated monument.

Upon completion of UST removal and remedial excavating and after collection of performance soil samples (Task 6 below), the excavation will most likely be backfilled with controlled-density fill (CDF). After backfilling, the street will be resurfaced with hot asphalt, and the concrete sidewalk and driveway

will be re-installed. Specifications for the restoration will be in accordance with the requirements of the City of Montesano Right-of-Way Permit and/or Streets Department.

3.4 Task 4 – UST Removal and Restoration of Work Areas 2, 3, and 4

EPI will coordinate with Whitney's personnel regarding access to the WAs. The USTs in Work Area-2, Work Area-3, and Work Area-4 are located in Whitney's employee work areas and automotive repair equipment such as tool benches, above ground hoists, and ASTs will have to be moved by Whitney's prior to concrete cutting. This will require substantial coordination with Whitney's personnel in order to limit the interruption of ongoing commerce at the facility. The exact staging and logistics of work for Task 4 remains to be established. Access to the paint shop will also be limited during the IRA.

EPI will coordinate with subcontractors to saw-cut and remove concrete from the surface of each WA. Initially, concrete will be removed from the area directly above each UST and an area extending approximately five feet laterally outward in all directions from the USTs, up to the building walls. Concrete may also be cut on the opposite side of the walls in Work Area-2 for access for soil sampling and backfilling. Additional concrete may be cut and removed during the remedial excavation activities described in Section 3.6. Concrete will be transported off-site for disposal or recycling.

EPI's Certified UST Site Assessor will be on-site to collect UST assessment soil samples as described in Section 3.6. Once concrete has been removed from the surface above the UST, the contractor will utilize a small backhoe (or standard hand-digging techniques, or vacuum when required) to expose the top of the UST. Any liquid in the USTs will be handled as described in Section 3.3.

After liquid (if present) is removed from the UST, the contractor will triple rinse the inside of the UST (unless it is already filled with sand or concrete). Wastewater generated during triple rinsing will be stored in 55-gallon drums along with potential drums containing UST contents until analytical data is received. If necessary, a Marine Chemist will inert the UST utilizing an inert gas such as carbon dioxide and verify that the UST is inert and "Safe for Transport" and/or "Safe for Cutting". Copies of these certificates will be provided to the EPI on-site.

Once a UST is deemed safe by the Marine Chemist at each Work Area, the UST will be removed from the excavation by the contractor. One or more of the USTs may have to be cut in order to remove the UST if in an inaccessible area. If filled with concrete or sand, the contractor will determine the most practical method for removal. The location of any product piping, if present, is currently unknown. If present, piping will be removed or capped depending on location within the WA. After removal from the excavation, the USTs will be transported off-site for destruction. UST destruction certificates will be provided by the contractor.

At Work Area-2 and Work Area-4, the USTs are situated beneath structural components of the building (i.e., interior and exterior walls). The structural engineer will be present to observe and recommend the most practical option for removing the UST without causing damage to the building. It may be necessary to construct support structures beneath the walls while the UST is being removed.

As mentioned in Section 3.3, if residual soils containing contaminant concentrations above the cleanup levels are inaccessible during IRA and will remain in place, then EPI may elect to install vertical and possibly horizontal PVC piping and screen for a future soil vapor extraction system, or for the addition of bioremediation or chemical oxidation media. The exact layout of this piping will be determined in the field based upon the observed residual impacts. In Work Area-2 through Work Area-4 it is anticipated that such piping will most likely consist of four-inch diameter vertical wells constructed of Schedule 40 PVC and screened over the vertical interval of impacted soils. The top end of the piping will be daylighted inside a flush-mounted, traffic-rated monument.

Upon completion of UST decommissioning and remedial excavation, each excavation will be backfilled with CDF. After backfilling, the existing grade will be matched with dowel reinforced concrete. In general, the appearance at each WA will be restored to a condition as close as possible to that observed prior to the IRA.

3.5 Task 5 – Impacted Soils Profiling and Waste Disposal

EPI will coordinate establishing a profile for disposal of all impacted soil removed during the IA. Data from the RI indicate that soil impacts in the IA Work Areas may consist of both PCE- and petroleum hydrocarbon-impacted soil. This requires that soil containing PCE be disposed of as Resource Conservation and Recovery Act (RCRA) F002 listed hazardous waste at a regulated disposal facility approved for accepting PCE-impacted soil. As such, it may be necessary to setup soil profiles at more than one disposal facility to enable the disposal of soils that contain PCE as well as those soils that contain only petroleum hydrocarbon related impacts. EPI will set up a soil profile for disposal of petroleum-contaminated soil prior to the start of the IRA. A profile for PCE impacted soil will be set up only after the receipt of analytical data indicating that detectable concentrations of PCE are present in the soils from the WAs. A PCE soil impacted profile will require that Whitney's obtain an EPA RCRA identification number.

Alternatively, EPI may seek a "contained in" determination from Ecology if PCE impacts to soil are found to be minimal and may not require disposal as a RCRA waste under current regulations.

3.6 Task 6 – Remedial Excavation Soil Sampling

Once the USTs are removed from each WA (See Task 2 and 3), UST assessment soil samples (those soil samples collected as required by Ecology during UST permanent closure activities) will be collected from beneath each UST and from the sidewalls of the UST excavation. If field evidence indicates that a release has occurred, the accessible impacted soils will be removed through direct excavation using appropriate equipment. Performance soil samples (those soil samples collected to indicate if cleanup levels have been attained during the remedial action activities, if required) will be collected from both the sidewalls and bottoms of the remedial excavations. All UST assessment soil samples will be submitted to an on-site mobile laboratory for rush analysis of target analytes described in Section 1.8. Additional details regarding sample collection procedures and frequency are indicated below in Section 4.2.

In general, the bottom of each remedial excavation is not anticipated to extend deeper than about 16 feet bgs in exterior locations and not deeper than about 12 feet bgs in interior locations. The depth of excavation may also be limited near structures or other improvements (i.e., utilities). The lateral extent of excavation may vary at each WA depending on the field conditions encountered at each WA. In areas where remedial excavation is not restricted, field screening will be used to guide the excavation and when field screening indicates that all impacted soils have been removed, performance soil samples will be collected from the sidewalls and bottoms of the excavation limits and analyzed for the analysis appropriate for that WA. Analytical data from these samples will be utilized to guide additional excavation (if necessary) until analytical data demonstrate that concentrations of target analytes are below MTCA Method A Soil Cleanup Levels for Unrestricted Land Use.

As discussed above, soil samples will be collected from immediately beneath and surrounding the UST installation area after UST removal. The analytical results for these assessment samples will be used to determine whether a release has occurred from the UST. The samples will be submitted for analysis of the target analytes indicated in Section 1.8.

If target analytes are detected then additional soil will be excavated from the area represented by the soil sample. The excavation will be guided by the results of additional performance samples, which will be analyzed for those target analytes detected at concentrations above the MTCA Method A cleanup levels.

Excavation of impacted soils will continue until either a) performance samples indicate that the target cleanup levels have been attained both laterally and vertically or b) site improvements or site features preclude additional excavation. Once performance sample analytical data demonstrate that target analyte concentrations are below MTCA Method A Soil Cleanup Levels in a given area, then the samples will be considered as final performance samples and remedial excavation will be considered complete in that area.

The locations of all soil samples will be fully documented and depicted on field notes and in final report graphical representations. The final limits of the remedial excavation and the locations of final performance samples will also be appropriately represented.

Exterior excavation will be performed using either a track-mounted excavator or a tire-mounted backhoe, depending upon access. Interior excavation will be performed either using a low-clearance mini-excavator, vacuum excavation, or through manual excavation. Air-knife techniques may also be employed. Temporary shoring will be required for worker access into excavation deeper than 4 feet (i.e., if vertical sidewalls are used) or to protect adjacent structures. Excavation techniques such as slot-cutting or pin-piles may be used adjacent to load bearing walls or foundations.

Excavated soils will either be directly loading into trucks for off-site disposal or, in the case of interior excavation with lower excavation rates, may be temporarily stockpiled on-site. Stockpiled soil will be placed on either an asphalt or concrete surface or on plastic sheeting. Stockpiled soil that remains on-site overnight will be covered with plastic sheeting and ballasted to protect the sheeting from blowing away. Uncovered soil stockpiles will be surrounded by hay bales to protect against erosion and to

protect stormwater runoff quality. Stockpiled soil will then be loaded and transported to an appropriate facility based upon the results of laboratory analytical data and approval from the accepting facility.

3.7 Task 7 - Preparation of Interim Remedial Action Report

Upon completion of field activities, receipt of final laboratory reports, and receipt of all pertinent UST decommissioning documentation and disposal documentation, a report summarizing the IRA activities, findings and conclusions will be prepared for submittal to Ecology for review and comment. The report will present a narrative of the work performed; documentation of remedial excavation and soil sampling; figures showing locations of USTs, soil samples, remedial excavations, field screening and laboratory analytical results. Data will be presented in tabular and/or graphical form and will be evaluated and interpreted. Findings and conclusions will be presented that characterize subsurface environmental conditions and remediation efforts. Although this report is not being prepared under the Order, the draft report will be submitted to Ecology in good faith within 60 days of receipt of all final laboratory data.

3.8 IA Project Schedule

A project schedule is presented on Figure 8. The schedule is presented as elapsed time (*i.e.*, it is not linked to a defined start date). Upon Ecology approval of a final IRAWP and authorization to proceed from EPI's client, EPI will submit the 30-Day Notice to Ecology for UST closure, and simultaneously start preparation of the required documents for the City of Montesano Right-of-Way Permit, and contact the local power company for moving the power pole adjacent to UST-5.

It is estimated that approximately 16 weeks will be necessary to complete the IA and prepare the Draft IADG Report. This schedule is subject to change based upon subcontractor availability, City of Montesano permit review time, WA access, relocation of public utilities (power pole), or other considerations beyond the control of EPI or the PLPs.

4.0 SAMPLING AND ANALYSIS PLAN

This Sampling and Analysis Plan (SAP) has been prepared in accordance with WAC 173-340-820. The purpose of the SAP is to provide a description of environmental sample collection and handling, as well as specific laboratory analytical methods.

4.1 Ground Water Monitoring Well Installation and Sampling Procedures

Up to six new ground water monitoring wells may be installed as a component of the proposed interim action and data gaps investigation. Proposed well locations are depicted on Figure 2. The new monitoring wells will be drilled and installed using procedures sufficient to meet resource protection well construction standards found in WAC 173-160-420, Minimum Standards for Construction and Maintenance of Wells. Construction details, well design, and well development procedures are presented below. New wells will be installed using standard Hollow Stem Auger (HSA) drilling techniques and will be logged and sampled following standard procedures described below.

4.1.1 Monitoring Well Installation

Monitoring wells will be constructed of 2-inch diameter, flush-threaded, Schedule 40 polyvinylchloride (PVC) well casing and screen in conformance with WAC 173-160. Wells will be approximately 26 feet in total depth with approximately 15 feet of screened interval; however, exact dimensions will be determined based on field conditions. The terminal depth of wells will be at about 10 feet below the unsaturated/saturated interface at the time of drilling with a 15-foot screened interval. This will allow the water table to intersect the well screen throughout the normal annual fluctuations in water table elevation.

Well screens assemblies will consist of three 5-foot lengths of 0.020-inch (20-slot), flush-threaded, machine-slotted, Schedule 40 PVC set in a 10-20 Colorado silica sand (CSSI), 2/12 Monterey, or equivalent silica sand filter pack. The well design includes a 0.5-foot-long flush-threaded, Schedule 40 PVC sump with a flush-threaded end cap. Flush-threaded, Schedule 40 PVC blank well casing will extend from the top of the screened interval to approximately 6 inches bgs. A 2-inch diameter, locking, watertight PVC well cap will be installed to secure the well casing.

The sand filter pack will be installed by pouring sand into the annulus between the well casing and auger as the auger is withdrawn. A weighted tape will be used to monitor filter pack placement and depth during installation. The sand filter pack will extend at least one foot above the top of the screened interval.

A minimum 2-foot-thick seal of hydrated bentonite chips will be installed in the annular space immediately above the sand filter pack and hydrated with potable water. The remainder of the annular space will be sealed with bentonite grout or hydrated bentonite chips to within one foot of the ground surface.

The new wells will be secured with flush-completion steel protective monuments set in concrete. The monuments will be raised approximately one inch above the existing grade with a sloping concrete pad to minimize the potential for surface water entering the monument. All down-hole well components will be either factory-decontaminated and in their original sealed packaging or pressure-washed to the satisfaction of the on-site EPI personnel prior to installation.

All wells will be surveyed after installation by a Washington-licensed surveyor to the same elevation datum used for the Ecology area-wide ground water investigation. Surveying will include measurement of the top surface of the well monument and the top edge of the well north side of the casing. Horizontal locations shall be to an accuracy of ± 0.1 foot and vertical elevations shall be to an accuracy of ± 0.01 foot. Spot checks of pertinent Site features will be performed using a handheld GPS unit with a horizontal accuracy of ± 1.0 foot.

4.1.2 Monitoring Well Development

The new wells will be developed using a combination of pumping and surging. Well development will be completed by continuous pumping at a steady rate using a peristaltic pump or submersible pump, depending upon the hydraulic transmissivity of the well. Well development equipment used inside a well will be either new single-use equipment, new, dedicated equipment, or will be decontaminated by pressure washing to the satisfaction of the on-site EPI field personnel. Well development will be terminated when the turbidity of the discharge water decreases to less than 10 nephelometric turbidity units (NTU) or to the satisfaction of the onsite EPI personnel. In any event, no more than 10 wetted casing volume will be removed during well development.

4.1.3 Monitoring Well Sampling

Soil samples collected during monitor well installation may be field screened using a photoionization detector (PID) to assess the potential presence of volatile compounds.

For PID screening, a portion of the soil sample will be placed in a Ziploc™ type plastic bag, disaggregated and allowed to sit undisturbed for at least 10 minutes. The PID inlet tube will then be inserted into the bag and the highest observed reading will be recorded. For sheen testing, a portion of the sample will be placed in a clean pan, sprayed with a small amount of de-ionized water and a qualitative assessment of any observed sheen will be recorded. The results of field screening will be noted in the field logbook and on the boring logs.

After installation and development, a total of 6 new and 18 existing monitoring wells will be sampled. It is currently anticipated that the wells will be sampled after performance of the IAs to provide baseline conditions for purposes of monitoring the IA performance. Prior to sampling, a product/water interface probe will be utilized to measure the thickness of SPH (if present) and the depth to water. If SPH are encountered at a well, the depth to the top and bottom of the SPH will be measured to establish an SPH thickness. No wells with SPH will be sampled for dissolved-phase constituents. If SPH is observed, a sample of the SPH may be collected and archived. The depth to water will be measured

relative to the northernmost point on the well casing. This measurement will be subtracted from the surveyed elevation to establish a piezometric elevation.

After collection of water level data, each well where SPH is not encountered will either be purged of 3 wetted casing volumes or until field parameters stabilize to within 10%. Purging will be performed using a peristaltic pump and dedicated tubing. Measurements of pH, temperature, and conductivity will be recorded initially at each well volume and prior to sample collection.

During sample collection, the flow rate of the peristaltic pump will be reduced to 100 milliliters/minute and samples will be pumped directly from the pump discharge tubing to laboratory-supplied containers appropriate for the intended analysis.

Immediately upon collection, samples will be labeled and placed in an iced cooler pending submittal to the analytical laboratory. All pump tubing will be disposed after use and all purge water will be contained and left on-site pending receipt of analytical results.

4.2 UST Assessment Soil Samples

Once the USTs are decommissioned and removed from each WA, UST assessment soil samples will be collected at locations described in Section 2.6. The proposed UST assessment soil sample locations are depicted on Figures 4 through 7. These locations are subject to change depending on actual site conditions and field screening observations. All samples will be collected by EPI's Washington State Certified UST Site Assessor.

Prior to sample collection, soil will be field screened using visual and olfactory observations and a photoionization detector (PID) equipped with a 10.6 meV lamp to assess the potential presence of volatile compounds and to evaluate which portions of the UST excavation may be impacted. For PID screening, a portion of the soil sample will be placed in a sealed plastic bag, disaggregated, and allowed to sit undisturbed for approximately 10 minutes. The PID inlet tube will then be inserted into the bag and the highest observed reading will be recorded. The results of field screening will be utilized to select actual soil sampling locations.

Assessment and performance soil samples will be collected from the excavation using either from the backhoe bucket, or from a hand-auger with extensions, or both. Samples from the backhoe bucket will be collected by removing the top six-inches of slough to expose the undisturbed soil below. A clean stainless steel or disposable plastic trowel will be used to place the soil directly into the laboratory-supplied sample container. Samples collected using a hand auger will be placed directly from the bottom of the auger into the sample container. For samples requiring VOC testing, EPI will utilize EPA Method 5035 for field extraction/preservation using equipment provided by the laboratory. It should be noted that EPA Method 5035 allows on-site mobile laboratory analysis in lieu of field extraction/preservation. Soil samples may be submitted directly to the on-site mobile laboratory for the analysis of target analytes deemed appropriate for the WA as described in Section 1.8 and summarized in Table 2.

The Ecology UST decommissioning guidelines state that at least 3 soil samples will be collected from around each UST that has a capacity of less than 20,000 gallons and submitted for appropriate analyses. This includes one sample from directly beneath the UST and two samples from the UST excavation sidewalls. The total number of UST assessment soil samples collected at each WA may vary, but will not be less than the three samples required by Ecology for each UST. In general it is anticipated that at least two samples will be collected from beneath each UST and four from the excavation sidewalls at the cardinal points of the compass.

The Ecology guidance also states that when a petroleum release is detected during UST decommissioning that soil samples should be analyzed for compounds listed in Table 6-1 of the *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* dated February 1991 (revised April 2003) by Ecology. If a petroleum release is encountered during UST removal, the analytical data required in Table 6-1 will be obtained from analytical data previously obtained during the RI and analytical data obtained during the IRA. The target analytes discussed in Section 1.8 of this IRAWP are consistent with the guidance in Table 6-1.

4.3 Remedial Excavation Performance Samples

Once excavation of impacted soils is completed and field screening (*i.e.*, visual and olfactory observations and PID readings) indicates that soil impacts are no longer present, performance soil samples will be collected from the sidewalls and bottoms of the excavation. Soil samples will be submitted to the on-site mobile laboratory for the analysis of compounds that exceeded the MTCA Method A Soil Cleanup levels for Unrestricted Land Use in UST assessment soil samples. Once performance sample analytical data demonstrate that concentrations of target analytes are below MTCA Method A Soil Cleanup Levels for Unrestricted Land Use in a given area, remedial excavation will cease in that location. If soil concentrations remain above MTCA Method A Soil Cleanup Levels for Unrestricted Land Use after additional excavation, the EPI field professional will determine whether or not to perform additional remedial excavation based upon several factors. These may include structural limitations, interference with business operations, likelihood of removing all impacted soil from a given area and discussions with the Client and on-site personnel.

For excavation sidewalls less than 10 feet deep, one sidewall performance sample will be collected for every 20 linear feet of excavation sidewall, and for sidewalls deeper than 10 feet, two soil samples will be collected for every 20 linear feet of excavation. These samples will be collected from different depths to characterize the vertical distribution of impacts in the sidewall. There will be a minimum of one sample for each excavation sidewall. For example, a sidewall 19 feet long and 10 feet deep will have one sample (*i.e.*, one for each ~200 square feet). A sidewall 39 feet long and 15 feet will have four samples (*i.e.*, one sample for each ~150 square feet). This results in a sufficient level of characterization of the final limits of the remedial excavation and a high level of confidence that either a) all impacts have been removed or b) any residual impacts that could not be removed have been clearly characterized. One excavation bottom sample will be collected for every 400-square foot area of excavation bottom with a minimum of one sample. For example, a 20-foot by 20-foot excavation would have one bottom sample but a 25 foot by 25 foot excavation would have two bottom samples.

Final performance samples may also be submitted to a fixed-base analytical laboratory for analysis of compounds that cannot be performed in the mobile laboratory (*i.e.*, cPAHs and lead).

Prior to sample collection, all non-disposable sampling equipment will be decontaminated. Decontamination procedures will include a wash in a non-phosphate solution followed by double rinse in tap water and de-ionized water and allowed to air dry.

4.4 Investigation-Derived Waste Management

Soil cuttings produced during boring advancement at the subject property will be placed in Department of Transportation (DOT) -approved drums, labeled as to the location where generated, and stored on-site until laboratory analytical results are received. Individual drums may contain wastes from several locations and all locations will be indicated on a particular drum. Drums will be labeled "non-hazardous".

Development, purge, and decontamination water will be collected in DOT-approved drums, labeled and stored on-site. Representative water and, if present, sediment samples will be collected from each drum and submitted for analysis for target analytes.

Liquids encountered within the USTs and all liquids generated during triple rinsing of USTs will be transferred into DOT-approved drums. The drums will be labeled with the location as to where the waste was generated (e.g., WA1) and stored at the Site until analytical laboratory results for the liquid are received. Waste generated at each WA will be stored separately from waste generated at other WAs.

No waste will leave the Site until receipt of laboratory data and appropriate disposal methods have been approved.

4.5 Quality Assurance and Quality Control

Field sampling quality assurance/quality control (QA/QC) will include the collection of duplicate samples from 10 percent of the sampling locations. Each duplicate sample will be a split sample from the same location as the actual sample. Each duplicate will be submitted to the analytical laboratory as a blind sample with its own unique identification number. For ground water samples, the VOA sample containers will be alternated between the actual sample and the duplicate during sample collection. For soil samples, no compositing of soil prior to collection of the soil sample duplicates will be conducted due to the volatile nature of the COCs.

Field duplicate sample results will be used as a qualitative measure of both the reproducibility of sample results and the apparent homogeneity of impacts within a particular medium. If field duplicate sample analytical results fail to approximate the performance sample results, the laboratory QA/QC data for that batch of samples will be carefully checked and additional internal laboratory QA/QC verification may be required.

It is anticipated that the majority of soil samples from the UST excavating activities will be submitted to the on-site mobile laboratory for analysis. However, it may be necessary to submit a small number of samples to a fixed-base analytical laboratory to perform additional analysis that may be required during the IRA that cannot be performed by the mobile laboratory as well as confirm the results of the mobile lab.

The on-site mobile analytical laboratory and/or fixed-base laboratory will conduct standard internal QA/QC checks adhering to established protocols for each method. All laboratory QA/QC methods will be reported within the laboratory reports for each set of samples submitted.

4.6 Sample Labeling and Chain-of-Custody Protocol

All ground water samples and performance soil samples will be labeled with a designation that readily identifies that sample with the work area, sequential sampling number, and depth (*i.e.*, WA2-1:4 for soil, WCMW-2:GW for ground water). All sample depths will be recorded in feet. Labels will be affixed to each sampling container and will include the sample identifier, date and time collected, sampler's initials, and analyses to be performed.

Chain-of-custody is a procedure that provides a written record that can be used to trace the possession and handling of a sample from the moment of collection through analysis. Once a sample has been collected, a written account of the sample name, medium, depth, date, time of collection, and requested analyses will be placed on a pre-printed form supplied by the analytical laboratory. The sampler will then sign the form and each subsequent custodian of the sample(s) will sign and date the form until it is delivered to the laboratory for analysis. A complete chain-of-custody will be returned with laboratory reports upon completion of analysis. Copies of the chains-of-custody will be included in the IRA Report.

4.7 Laboratory Analytical Procedures

Target analytes identified in Section 1.8 for the soils are either known or suspected to be present in the IAWA. The following list identifies target analytes along with appropriate laboratory analytical methods for each:

- GRPH using Northwest Total Petroleum Hydrocarbons - Gasoline Range Organics (NWTPH-Gx) Method;
- DRPH & ORPH using Northwest Total Petroleum Hydrocarbons - Diesel Range Organics-extended (NWTPH-Dx) Method;
- VOCs^(a) using EPA Method 8260B;
- cPAHs^(b) using EPA Method 8270 SIM; and
- Total lead using EPA Method 7421.

Notes:

- (a) VOCs analysis includes BTEX, PCE, methyl tertiary butyl ether (MTBE), dibromoethane 1,2 (EDB), dichloroethane 1,2 (EDC), 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene and naphthalenes.
- (b) Analysis may be required to fulfill Ecology analytical requirements during UST decommissioning.

The mobile laboratory is unable to analyze for cPAHs and total lead. Therefore, samples to be analyzed for these analytes will be submitted to a fixed-base laboratory. Additionally, one soil sample from each WA will be analyzed for volatile petroleum hydrocarbons (VPH) for hydrocarbon fraction determination to assist with computer modeling the Site COCs for the feasibility study.

Appropriate sample container, preservatives, and holding times for each analysis are summarized in Table 3.

Target analytes identified in Section 1.8 for ground water are either known or suspected to be present in the IAWA. The following list identifies target analytes along with appropriate laboratory analytical methods for each:

- GRPH using Northwest Total Petroleum Hydrocarbons - Gasoline Range Organics (NWTPH-Gx) Method; and
- VOCs including BTEX and PCE using EPA Method 8260B.

Ground water samples will be submitted to a fixed-base laboratory for analysis.

5.0 HEALTH AND SAFETY PLAN

This Health and Safety Plan presents procedures to minimize the risk of chemical and physical hazards to Site workers. This plan will be available to all EPI personnel involved in the IRA and will be made available to all subcontractors and other non-EPI workers who may need to work on-site. It is stipulated that subcontractors and non-EPI workers are responsible for their own safety while on-site.

5.1 Work Activities and Description

The work area and a description of the planned IRA activities are presented in Sections 2 and 3. The work is intrusive into the subsurface and will take place in active city streets and sidewalks, as well as within the automotive maintenance and repair shop area of an active business. In summary, the work activities include the following:

1. Removal of asphalt and or/concrete surface,
2. UST decommissioning and removal,
3. Removal of all reasonably accessible impacted soil,
4. Restoration of roadway, sidewalk, and interior work areas,
5. Installation of ground water monitoring wells in South First Street, West Pioneer Avenue, and South Main Street, and;
6. Sampling all of the wells located across the site.

EPI will coordinate street and/or lane closure requirements with the City of Montesano and will include a traffic control plan as well as a sidewalk closure plan and barricades.

EPI will attempt to minimize impacts to the business operation; however, certain measures must be undertaken to protect personnel and prevent any health and safety impacts to nearby workers. Only workers trained and currently certified in hazardous waste operations will be allowed in the work area. The work area will be delineated by orange cones and caution tape and bystanders will be prevented from entering the work area.

5.2 Hazard Description

Known and suspected chemical contaminants that may be encountered in the soils during the interim remedial action include the following:

- Total Petroleum Hydrocarbons – gasoline range
- Total Petroleum Hydrocarbons – diesel and oil range

- BTEX VOCs
- Lead
- Low levels of other VOCs (i.e.tetrachloroethane)

Site contaminants may be in a solid, liquid, or vapor state and may be volatile, flammable, and/or toxic. Likely routes of exposure include dermal contact, inhalation, ingestion, and absorption.

Table 4 lists site COPCs, action levels, exposure routes, and possible physiological impacts. An activity hazard analysis for chemical exposure indicates that chemical exposure may result by skin or eye contact when handling contaminated soil and ground water or inhaling vapors emanating from contaminated media. Ingestion and absorption are not likely.

TABLE 4. POTENTIAL CHEMICAL HAZARDS

Chemical Name	Action Levels			Exposure Route	Target Organs	Symptoms
	PEL*	STEL*	IDLH*			
Benzene	1 ppm	5 ppm	500 ppm	Inhalation, ingestion, skin/eye contact	Blood, central nervous system; skin; bone marrow; eyes; respiratory system	Irritation of eyes, nose, respiratory tract; giddiness; headache; nausea; staggered gait; fatigue; anorexia; lassitude; dermatitis; bone marrow; depression
Ethyl benzene	100 ppm	125 ppm	800 ppm	Inhalation, ingestion, skin/eye contact	Eyes; upper respiratory system; skin; central nervous system	Irritation of eyes and mucous membranes; headache; dermatitis; narcosis; coma
Toluene	100 ppm	150 ppm	500 ppm	Inhalation, absorption, ingestion, skin/eye contact	Central nervous system; liver; kidneys; skin	Fatigue; confusion, euphoria, dizziness, headache; dilated pupils; lacrimation; nervousness; insomnia; Paresthesia; dermatitis
Xylene	100 ppm	150 ppm	900 ppm	Inhalation, ingestion, absorption, skin/eye contact	Central nervous system; GI tract; blood; liver; kidneys; skin	Dizziness, excitement, drowsiness, uncoordination, staggered gait; irritation of eyes, nose, throat; corneal vacuolization; anorexia; nausea; vomiting abdominal pain; dermatitis
Heptane	85 ppm	500 ppm	750 ppm	Inhalation, ingestion, skin/eye contact	Skin; respiratory system; central nervous system	Lightheadedness, vertigo; loss of appetite, nausea; unconsciousness
Hexane	50 ppm	500 ppm	1,100 ppm	Inhalation, ingestion, skin/eye contact	Eyes; skin; respiratory system; central nervous system; peripheral nervous system	Irritation of eyes, nose; lightheadedness; nausea
Kerosene	100 ppm	N.D.	N.D.	Inhalation, ingestion, skin/eye contact	Eyes; skin; upper respiratory system; central nervous system	Irritation of eyes, skin, nose, throat; burning in chest headache; nausea; lassitude; restlessness; incoherenc e; vomiting; chemical pneumonia; et al.
Lead	0.050 mg/m ³	None	100 mg/m ³	Inhalation, ingestion, direct contact	Eyes; GI tract; central nervous system; kidneys; blood; gingival tissue	Weakness; lassitude; insomnia; facial pallor; pale eyes; anorexia; low weight; malnutrition; constipation; abdominal pain; colic; anemia; gingival lead line; tremor; paralysis of wrist, ankles; encephalopathy; kidney disease; irritated eyes; hypotension

Notes: PEL - permissible exposure limit

STEL – short-term exposure limit

IDLH – immediately dangerous to life and health

ppm – parts per million

N.D. – no data

mg/m³ – milligrams per cubic meter

In addition to the listed chemical hazards, physical hazards related to UST pump-out, excavation and tank removal, soil sampling, excavation backfilling, and general work activities are expected. The work will take place inside a building and overhead clearances will be limited. Equipment operators will become aware of overhead limitations before starting work and will use a spotter, as necessary, to enable safe operations. Shoring may be necessary inside the excavation if the depth is greater than

four feet and if workers are required to enter the excavation. Table 5 is an activity hazard analysis for physical hazards expected at the Site.

Table 5. Potential Physical Hazards		
Category	Cause	Prevention
Head Hazards	Falling and/or sharp objects, bumping hazards.	Hard hats will be worn by all personnel at all times.
Foot/Ankle Hazards	Sharp objects, dropped objects, uneven and/or slippery surfaces, chemical exposure.	Chemical resistant, steel-toed boots must be worn at all times on-site.
Eye Hazards	Sharp objects, poor lighting, bright lights (welding equipment), exposure due to splashes.	Safety glasses/face shields will be worn when appropriate. Shaded welding protection will be worn when appropriate.
Traffic	Site is both outside in the street and inside in an operational facility; only traffic expected is associated with tank removal and backfilling.	Look both ways before walking, wear high-visibility safety vest, place warning tape and traffic cones to warn personnel of work area limits.
Electrical Hazards	Underground utilities, overhead utilities, motors, electrical panels, electrical equipment, and breakers.	Locator service mark-outs, inspect work area prior to starting work.
Mechanical Hazards	Heavy equipment such as excavators, service trucks, dump trucks, and powered equipment such as saws, drills, etc.	Competent operators, backup alarms, regular maintenance, daily mechanical checks, proper guards.
Vapor Inhalation	Volatile vapor from open excavation.	Monitor breathing zone by olfactory means and confirm/quantify with photoionization detector (PID); open doors and/or use exhaust fans to promote ventilation and eliminate exposure; if required by site air monitoring findings, don respirator.
Fire and Explosion Hazards	Volatile vapor from open excavation.	Periodically monitor site with combustible gas indicator; record readings; open doors and/or use exhaust fans to promote ventilation and eliminate risk.
Overhead Hazards	Overhead electrical outside; Work inside building.	Operators to evaluate overhead clearance before operating equipment; use of spotters to guide operators.
Noise Hazards	Machinery creating >85 decibels TWA, >115 decibels continuous noise, or peak at >140 decibels.	Wear earplugs or protective earmuffs.
Fall Hazards	Elevated and/or slippery or uneven surfaces. Trips caused by poor "house keeping" practices.	Care should be used to avoid such accidents and to maintain good "house keeping."
Lifting Hazards	Injury due to improper lifting techniques, overreaching/overextending, heavy objects	Use proper lifting techniques and/or mechanical devices where appropriate.
Lighting Accidents	Improper illumination.	Work will proceed during daylight hours only or under sufficient artificial illumination.

5.3 Personal Protective Equipment

At a minimum, all field activities will be conducted in Level D protection. Personal protection requiring Levels A, B, and C are not anticipated for this project. Air monitoring will be conducted as a protective measure; however, upgrading to Level C by incorporating respiratory protection is not anticipated. Should conditions change, work will stop and this health and safety plan will be amended, as appropriate, before resuming work.

Workers performing general Site activities will wear level D protection including the following items:

- hard hat
- safety glasses
- steel-toed work shoes or boots
- Reflective safety vest
- work gloves (leather, canvas, or other appropriate material, when working with mechanical equipment; chemical-resistant gloves for soil and water sampling)

Temperature-appropriate long pants are required. Hearing protection will be made available to all Site workers. In addition, workers performing sampling activities will wear chemical-resistant gloves (nitrile, neoprene, or equivalent material) during sampling activities.

5.4 Air Monitoring

Air monitoring will be conducted during UST removal using either a combustible gas indicator (CGI) or a photoionization detector (PID). The air monitoring will be conducted at regular intervals and documented in the field logbook. All monitoring measurements will be made within the breathing space of the workers.

The air monitoring action level is 5 parts per million (ppm). The action level is based on the Short-Term Exposure Limit (STEL) for benzene (15-minute time-weighted average). If the 5 ppm level is continuously exceeded for a period of 10 minutes, a second measurement will be made after waiting 15 minutes. If the action level is exceeded after the second measurement, monitoring will proceed to a benzene-specific Draeger tube.

If benzene is confirmed to be present at a concentration greater than 5 ppm for 15 minutes using a Draeger tube, work will stop. In this case, an upgrade to Level C using an air-purifying respirator will be required.

5.4.1 Inhalation Hazard

During UST removal open excavations may allow volatile vapors to escape into the site worker breathing zone if soil concentrations of COPCs are large. Olfactory means and air monitoring by PID will be used to determine if an inhalation hazard exists. Site control will be maintained to minimize potential exposure. If necessary, opening doors and/or use of exhaust fans will be made to promote

ventilation and minimize any inhalation hazard. An air-purifying respirator may be used per the air monitoring protocol specified in Section 5.4.

5.4.2 Fire and Explosion Hazard

A CGI will be used to monitor for fire and explosion hazard during UST removals. Any CGI reading in excess of 10% will cause an immediate work stoppage. Site control will be maintained to minimize the potential hazard. Engineering controls will be employed to eliminate the hazard. Engineering controls will consist of opening doors and/or use of exhaust fans. After a work stoppage due to a CGI reading greater than 10%, the CGI will be used to verify that there is no fire or explosion hazard before resuming work.

5.5 Exclusion Zone Around Work Locations

Multiple UST locations within and around the facility will be excavated. Exclusion zones will be established around each UST location to keep unauthorized personnel and the public out of the work location. Only persons with appropriate training and authorization from the Site Health and Safety Coordinator will be allowed to enter the exclusion zone while work is being performed.

It is expected that during this tank removal IRA personnel will not be working in or come directly in contact with contaminated media or free product. Because free product and contaminated soil will only come into contact with equipment, no formal contaminant reduction zone will be established. Instead, Site workers will appropriately discard potentially contaminated nitrile and work gloves when exiting the exclusion zone.

To minimize the possible spread of contaminated materials, the amount of equipment and number of personnel allowed in the exclusion zone will be kept to a minimum. Personnel will not kneel or sit on the ground and activities that may scatter dust or splash fluids, or any practice that may increase the possibility of hand-to-mouth transfer of contaminated material will be prohibited.

Eating, drinking, chewing gum, smoking, and use of smokeless tobacco are prohibited in the exclusion zone.

5.6 Personnel Decontamination and Disposal

Decontamination is necessary to limit the migration of contaminated media from the work zone onto the Site and the surrounding environment. The following equipment and procedures will be employed to decontaminate personnel and equipment.

Disposable sampling equipment will be used whenever possible to minimize the chance of cross contamination between samples and to simplify decontamination. After use, disposable sampling equipment will be placed in plastic garbage bags and appropriately disposed.

Personnel decontamination will consist of brushing dirt from clothing and shoes and disposing of chemical-resistant gloves between samples, before work breaks, and when quitting work for the day. It is recommended that personnel have a change of clothing available, if work clothing becomes grossly contaminated. There will be no eating or drinking allowed within the work zones.

All disposable equipment and contaminated clothing will be placed in garbage bags and appropriately disposed. These bags will be removed from the Site daily.

5.7 Site Control

Site control will be the responsibility of the Site Health and Safety Coordinator, who has the authority to order any non-project personnel from the Site. Any security breaches will be reported immediately to the Site Health and Safety Coordinator.

Traffic control will follow the traffic control plan approved by the City of Montesano. Work locations at the Site will be marked with barricades, caution tape and traffic cones. Only authorized personnel only will be allowed inside the marked work locations.

5.8 Emergency Response Plan

Emergency response plan procedures are to be followed in case of fire, explosion, medical emergency, Site traffic accident, or an uncontrolled release of contaminant. Site personnel should be continuously aware of Site conditions and try to prevent potential emergency situations from occurring. Factors to be aware of are planned work activities, visible or odorous chemicals, vehicular traffic, nearby electrical lines, weather conditions, and physical hazards. Potential emergency situations should be anticipated and plans made to avoid problems before they occur. The Emergency Response Plan should be reviewed during Site health and safety briefings so all personnel are aware of procedures should an emergency occur.

The Site Health and Safety Coordinator will act as the lead individual in the event of an emergency situation. This person will determine the need to implement emergency procedures and will coordinate actions with on-site client representatives, subcontractors, and EPI principals, and local responders.

In case of emergency the Site Health and Safety Coordinator will alert all Site personnel and evacuate, as necessary, to a safe assembly area. All Site personnel will be accounted for and the necessary notifications will be made. Emergency contact numbers and a route map to Grays Harbor Community Hospital in Aberdeen, Washington, are included below.

Call 911 if a fire, medical, or other emergency requiring outside assistance occurs. If a worker becomes seriously injured, ill, or unconscious, immediately request assistance. Injured personnel should receive appropriate first aid, as necessary.

After emergency contacts are completed, contact the company Health and Safety Manager, the project manager, and a company principal. The project manager will make follow-up notifications, including the client representative and any regulatory agencies, if applicable.

Emergency Planning		
Phone Numbers Service	Name	Number
Local Police	City of Montesano Police Dept.	911 (360-249-1031 non-emergency)
Local EMS	City of Montesano Fire Dept.	911 (360-249-4851 non-emergency)
Local Fire Department	City of Montesano Fire Dept.	911 (360-249-4851 non-emergency)
Local Hospital	Grays Harbor Community Hospital	360-537-5000
Client Contact		
EPI On-site Cell Phone Number	Eric Caddey	425-281-3629
EPI Office	Thomas Morin	425-395-0030 office 206-954-6957 cell

Directions to Nearest Medical Facility (Map Attached): Driving directions and a map indicating the recommended route to Grays Harbor Community hospital in Aberdeen are presented in the attachments. The hospital is located approximately 13.3 miles west along Highway 12 from the City of Montesano.

Site-Specific Health and Safety Plan Approvals		
Title: Personnel	Signature	Date
Site Safety Officer: Eric Caddey		
Project Manager: Thom Morin		
Company H&S Officer: Jeff Dengler		
Cc: Project File		

Additional Site Personnel

Printed Name and Company	Approval Signatures	Date

6.0 REFERENCES

- EPI, 2010 "Draft Remedial Investigation Report". Whitney's Chevrolet, Inc., Montesano, Washington. Environmental Partners, Incorporated, Issaquah, Washington. March 24, 2010.
- EPI, 2009 "Supplemental Remedial Investigation Work Plan". Whitney's Chevrolet, Inc., Montesano, Washington. Environmental Partners, Incorporated, Issaquah, Washington. April 13, 2009.
- Ecology, 2009 "Montesano Ground Water Investigation of Leaking Underground Storage Tanks, October 2007 and April 2008." Montesano, Washington. Washington Department of Ecology, Publication No. 09-03-011. Olympia, Washington. February 2009.
- EPI, 2007 "Phase I Environmental Site Assessment and Supplemental Historical Review." Whitney's Chevrolet, Montesano, Washington. Environmental Partners, Incorporated, Issaquah, Washington. February 14, 2007.
- Ecology, 2006 "Montesano Ground Water Investigation of Leaking Underground Storage Tanks, October 2004 and March 2005." Montesano, Washington. Washington Department of Ecology, Publication No. 06-03-008. Olympia, Washington. January 2006.
- GeoEng, 2005 "Ground water Investigation Downtown Montesano." Montesano, Washington. GeoEngineers, Incorporated for Washington Department of Ecology. Ground water Investigation File No. 0504-024-00. Tacoma, Washington. August 5, 2005.
- Fitt, 1995 "Report of Environmental Site Assessment, Soil Sampling and Analyses, Underground Storage Tank Decommissioning." Whitney's Chevrolet, Montesano, Washington. Fitt Environmental, Ridgefield, Washington. August 28, 1995.
- Ecology, 1991 "Guidance for Site Checks and Site Assessments for Underground Storage Tanks." Montesano, Washington. Washington Department of Ecology. Olympia, Washington. February 1991 (revised April 2003).

Tables

Table 1
Site COPC Screening/Cleanup Levels
Interim Remedial Action
Whitney's Chevrolet Facility
Montesano, Washington 98563

COPC	Media	MTCA Method	Screening/Cleanup Level	Units
Oil-range petroleum hydrocarbons	Soil	A	2,000	mg/kg
Gasoline-range petroleum hydrocarbons	Soil	A	100 ^(a)	mg/kg
	Soil	A	30 ^(b)	mg/kg
	Ground Water	A	800 ^(c)	µg/L
	Ground Water	A	1,000 ^(d)	µg/L
Benzene	Soil	A	0.03	mg/kg
	Ground Water	A	5	µg/L
Toluene	Soil	A	7	mg/kg
	Ground Water	A	1,000	µg/L
Ethylbenzene	Soil	A	6	mg/kg
	Ground Water	A	700	µg/L
Total Xylenes	Soil	A	9	mg/kg
	Ground Water	A	1,000	µg/L
Naphthalenes	Soil	A	5	mg/kg
Tetrachloroethylene (PCE)	Ground Water	A	5	µg/L
Lead (total lead)	Soil	A	250	mg/kg

(a) Gasoline Range organic concentration in the absence of benzene and the total concentration of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture.

(b) Gasoline Range organic concentration with benzene present

(c) With benzene detected in water

(d) No detectable benzene in water

COPC - Contaminants of potential concern

mg/kg = milligrams/kilogram

Table 2
Work Area Target Analytes in Soil
Interim Remedial Action
Whitney's Chevrolet Facility
Montesano, Washington 98563

Target Analyte	Media	MTCA Method	Cleanup Level	Units
Oil-range petroleum hydrocarbons	Soil	A	2,000	mg/kg
Diesel-range petroleum hydrocarbons	Soil	A	2,000	mg/kg
Gasoline-range petroleum hydrocarbons	Soil	A	100 ^(a)	mg/kg
	Soil	A	30 ^(b)	mg/kg
Benzene	Soil	A	0.03	mg/kg
Toluene	Soil	A	7	mg/kg
Ethylbenzene	Soil	A	6	mg/kg
Total Xylenes	Soil	A	9	mg/kg
Tetrachloroethylene	Soil	A	0.05	mg/kg
Total Naphthalenes	Soil	A	5	mg/kg
Lead (total lead)	Soil	A	250	mg/kg

(a) Gasoline Range organic concentration in the absence of benzene and the total concentration of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture

(b) Gasoline Range organic concentration with benzene present

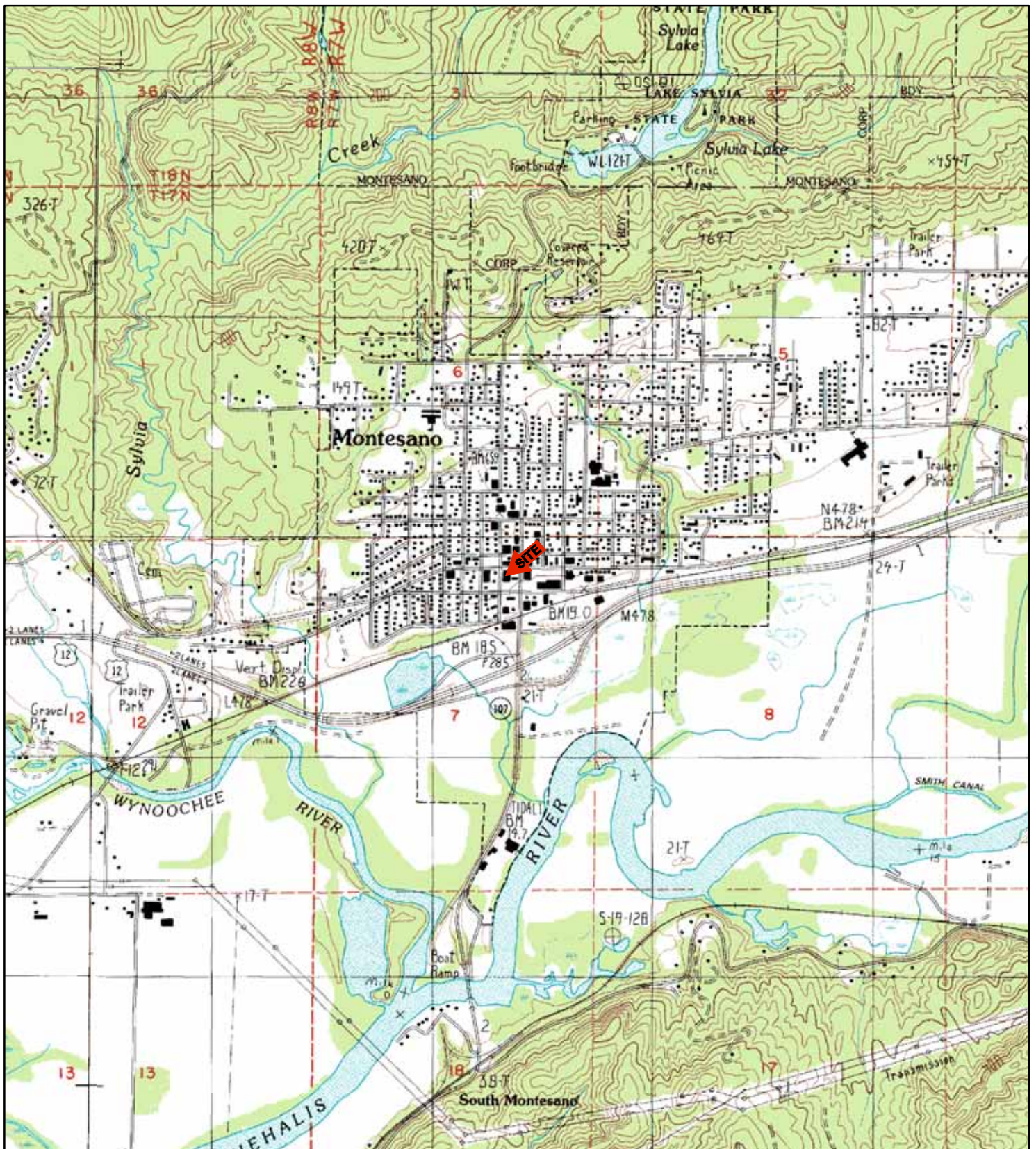
mg/kg = milligrams/kilogram

**Table 3
 Sampling and Analytical Criteria
 Interim Remedial Action
 Whitney's Chevrolet Facility
 Montesano, Washington 98563**

ANALYSIS	MEDIA					
	Soil			Ground Water		
	Container	Preservative	Hold Time	Container	Preservative	Hold Time
NWTPH-Dx	4 oz glass	Ice	14 days	NA	NA	NA
NWTPH-Gx	4 oz glass	Ice	7 days	3 - 40 ml VOA	HCL and ice	14 days
BTEX by EPA Method 8021B	4 oz glass	Methanol by EPA 5035	7 days	NA	NA	NA
VOCs by EPA Method 8260	1 - 4 oz glass 3 - 40 ml VOA	Methanol by EPA 5035	7 days	3 - 40 ml VOA	HCl and ice	14 days
cPAHs by EPA Method 8270 SIM	4 oz glass	Ice	14 days	NA	NA	NA
Total Lead by EPA 7421	4 oz glass	Ice	14 days	NA	NA	NA
VPH	4 oz glass	Ice	14 days	NA	NA	NA

NA = Not applicable

Figures



KEY: SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)
 MONTESANO, WASH. 1983; REVISED 1986
 CENTRAL PARK, WASH. 1983; REVISED 1986
 WYNOOCHEE VALLEY SW, WASH. 1987; REVISED 1990
 PRICES PEAK, WASHINGTON 1987; REVISED 1990



SCALE: 1:24,000

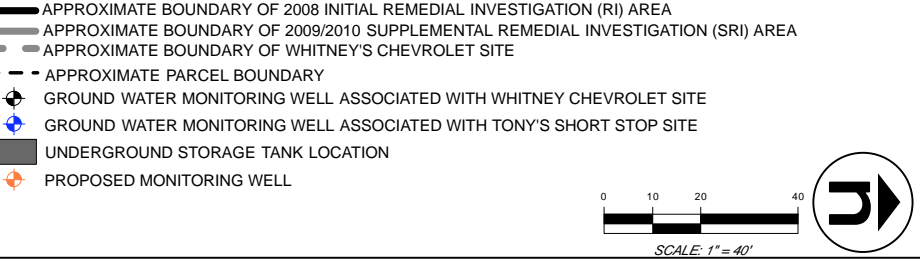
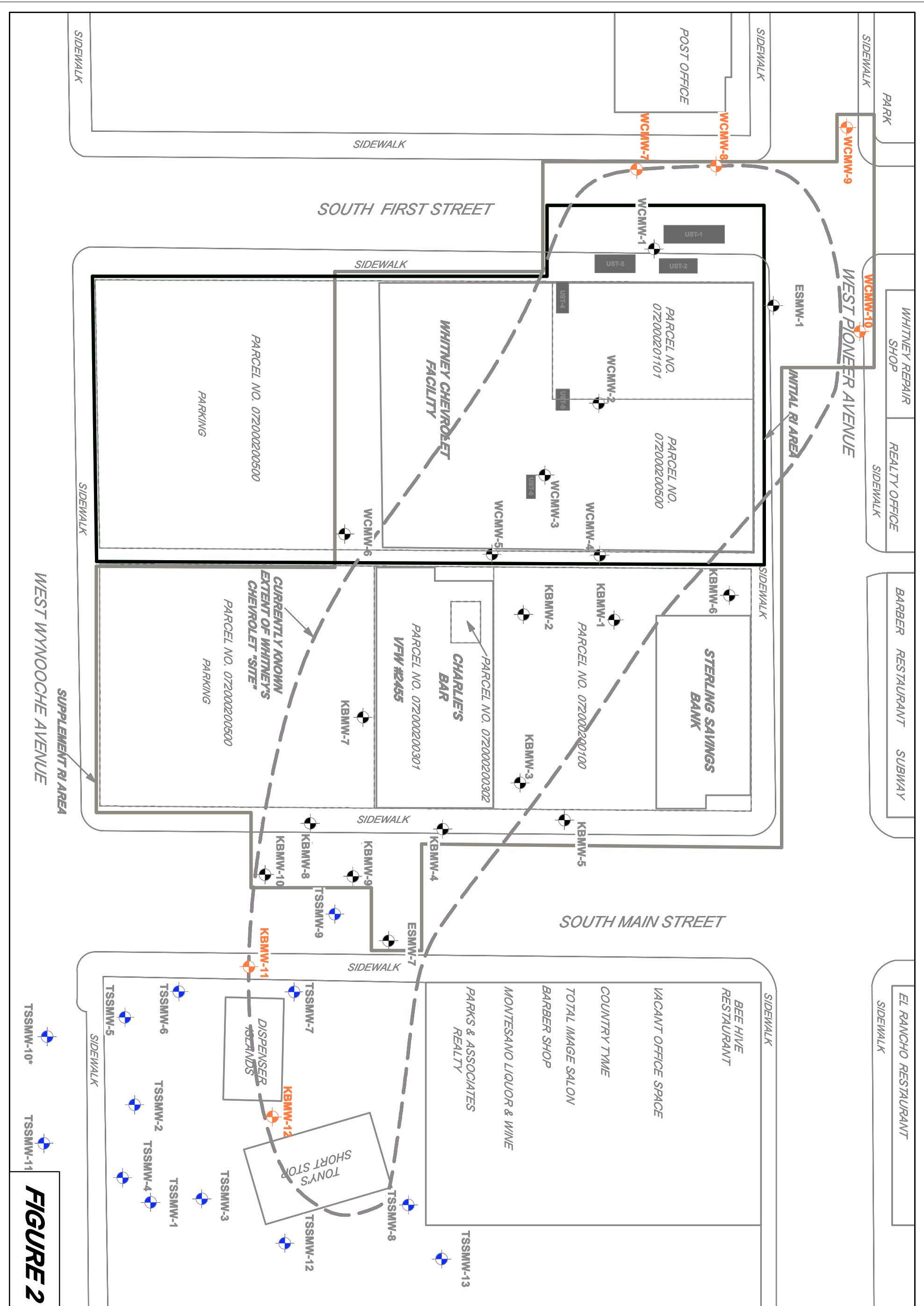


ENVIRONMENTAL PARTNERS INC
 295 NE Gilman Boulevard, Suite 201
 Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	51201.5		
PREPARED FOR	WHITNEY'S CHEVROLET		
LOCATION	123 WEST PIONEER AVENUE MONTESANO, WASHINGTON		
SHEET 1 of 1	DRAWN BY JS	REVIEWED BY TM	DATE 6/5/09



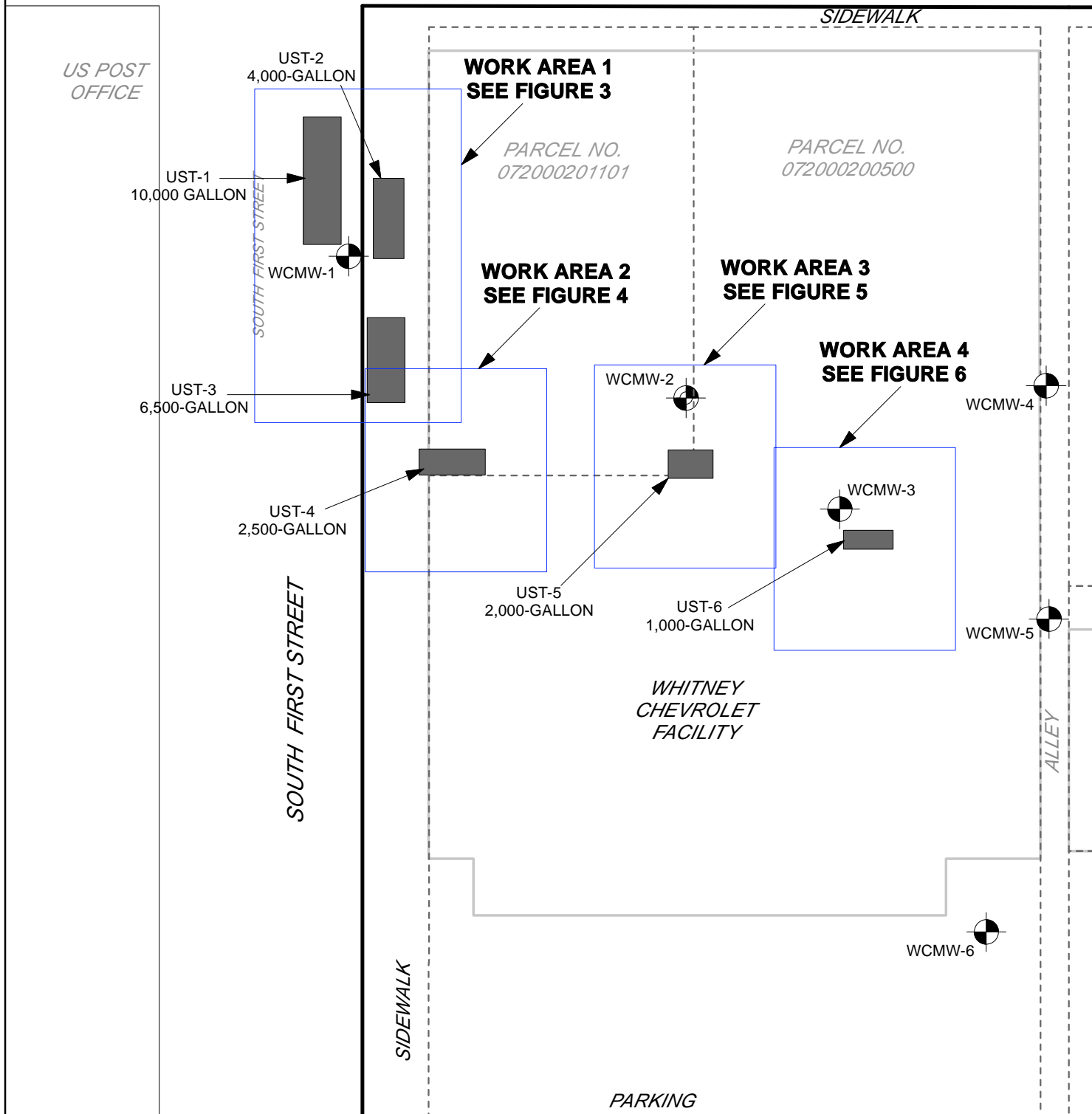
ept ENVIRONMENTAL PARTNERS INC
 295 NE Gilman Boulevard, Suite 201
 Issaquah, Washington 98027

FIGURE 2

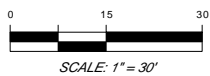
SITE REPRESENTATION SHOWING PROPOSED MONITORING WELL LOCATIONS

PROJECT	51201.7		
PREPARED FOR	WHITNEY'S CHEVROLET		
LOCATION	MONTESANO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ELC	11/09/10

WEST PIONEER AVENUE



- APPROXIMATE PARCEL BOUNDARY
- █ EXISTING UST LOCATION
- ⊙ EXISTING GROUND WATER MONITOR WELL LOCATION



ept ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 3

SITE REPRESENTATION WITH
IRA WORK AREAS AND UST LOCATIONS

PROJECT	51201.5		
PREPARED FOR	WHITNEY'S CHEVROLET		
LOCATION	123 WEST PIONEER AVENUE MONTESANO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ELC	11/09/10

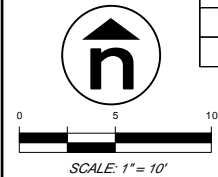
DPT-1	8-FT	12-FT
GRPH	ND (<5.6)	340
DRPH	ND (<35)	ND (<42)
ORPH	ND (<70)	ND (<85)
B	ND (<0.00074)	ND (<0.081)*
T	ND (<0.0037)	ND (<0.41)
E	ND (<0.00074)	ND (<0.081)
X	ND (<0.00224)	0.16
PCE	0.001	ND (<0.081)

DPT-2	8-FT	13.5-FT
GRPH	20	1,700
DRPH	ND (<36)	ND (<35)
ORPH	ND (<72)	160
B	0.037	3.9
T	ND (<0.0039)	47
E	0.05	130
X	0.0381	590
PCE	ND (<0.00077)	ND (<1.1)

DPT-5	12-FT	14.5-FT
GRPH	16,000	200
DRPH	ND (<34)	ND (<36)
ORPH	190	ND (<71)
B	6.6	5.7
T	110	18
E	42	4.6
X	240	23.1
PCE	ND (<1.0)	ND (<0.12)

WCMW-1	5.5-FT	10.5-FT
GRPH	ND (<13.0)	13
DRPH	ND (<36)	ND (<37)
ORPH	ND (<71)	ND (<75)
B	0.0033	1.0
T	ND (<0.0041)	0.19
E	0.0064	0.14
X	0.0307	0.48
PCE	ND (<0.00082)	ND (<0.00094)

DPT-3	9-FT	13-FT
GRPH	1,100	31
DRPH	ND (<35)	ND (<33)
ORPH	ND (<69)	ND (<67)
B	ND (<1.1)*	ND (<1.1)*
T	ND (<5.5)	ND (<5.5)
E	26.0	9.4
X	119	48
PCE	ND (<1.1)*	ND (<1.1)*



⊗ 2008 RI DPT SOIL SAMPLE LOCATION
 ⊕ PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATION. SAMPLE LOCATIONS MAY CHANGE BASED UPON FIELD OBSERVATIONS
 GRPH - GASOLINE-RANGE PETROLEUM HYDROCARBONS
 DRPH - DIESEL-RANGE PETROLEUM HYDROCARBONS
 ORPH - OIL-RANGE PETROLEUM HYDROCARBONS
 BTX - BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES
 ND - NOT DETECTED ABOVE THE COMPOUND-SPECIFIC LABORATORY DETECTION LIMIT
BOLD BOLD INDICATES THE CONCENTRATION WAS DETECTED ABOVE THE COMPOUND SPECIFIC LABORATORY DETECTION LIMIT. BOLD AND SHADED INDICATES THE CONCENTRATION EXCEEDED THE MTCA METHOD A SOIL CLEANUP LEVEL
 * MDL DUE TO MATRIX INTERFERENCES

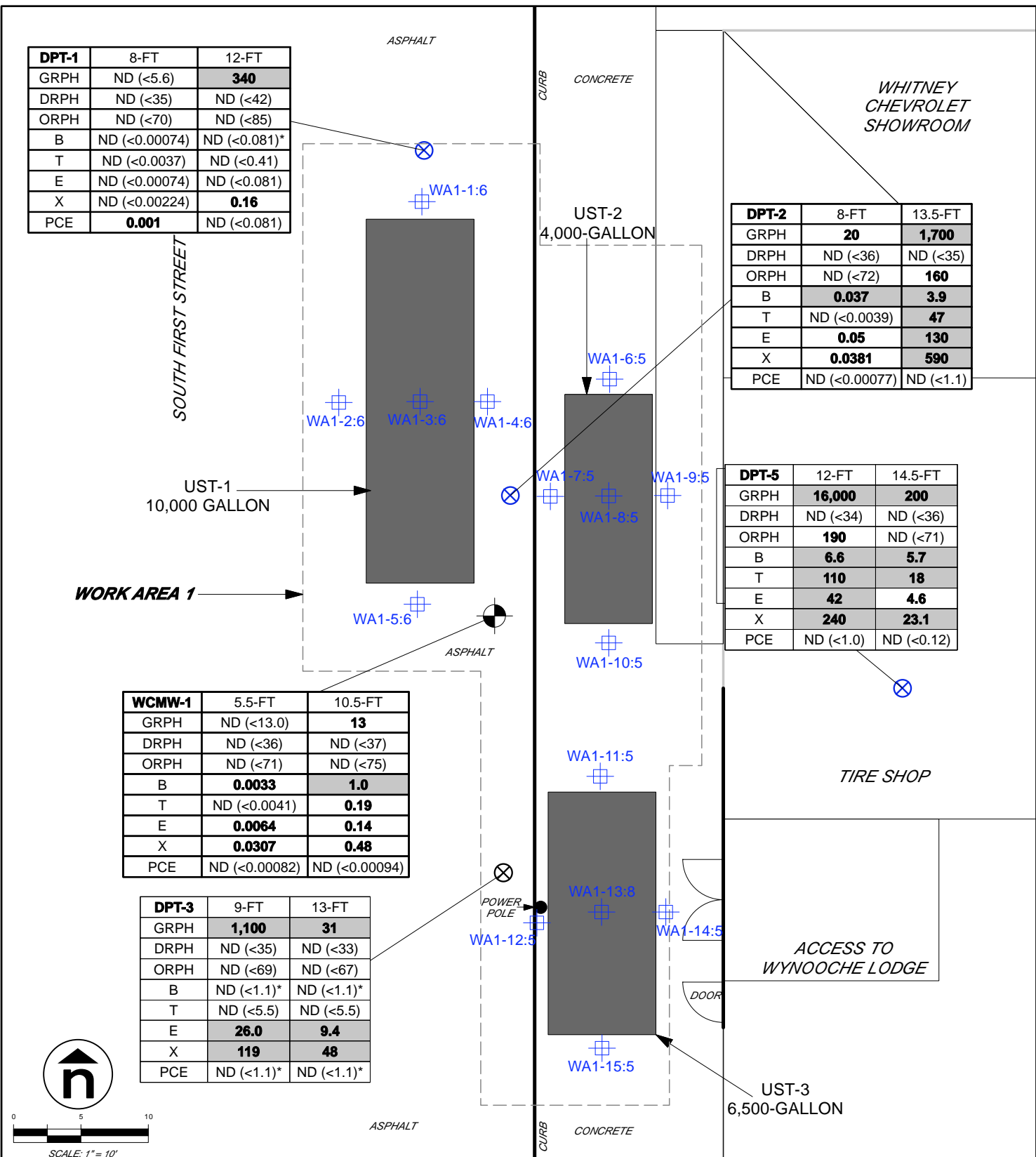
RESULTS IN mg/kg

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

FIGURE 4

WORK AREA 1 WITH UST LOCATION AND PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATIONS

PROJECT	51201.5		
PREPARED FOR	WHITNEY'S CHEVROLET		
LOCATION	123 WEST PIONEER AVENUE MONTESANO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ELC	11/09/10



ACCESS TO
WYNOOCHE LODGE

DPT-4	8-FT	13-FT
GRPH	ND (<6.2)	39
DRPH	ND (<37)	ND (<30)
ORPH	ND (<74)	ND (<60)
B	ND (<0.00076)	0.081
T	ND (<0.0038)	0.29
E	ND (<0.00076)	0.14
X	0.0019	0.81
PCE	0.0010	ND (<0.042)

DOOR

6,500-GALLON UST

ROLL-UP DOOR

APPROXIMATE FLOOR
CUT FOR POTENTIAL WA2
REMEDIAL EXCAVATION

CONCRETE SIDEWALK

WA2-1:6

WA2-2:6

WA2-4:6

WA2-5:10

WA2-3:6

INTERIOR WALL

MACHINE SHOP

DPT-6	12-FT	16-FT
GRPH	ND (<28)	ND (4.5)
DRPH	ND (<35)	ND (<31)
ORPH	210	ND (<61)
B	ND (<0.00075)	0.056
T	ND (<0.0037)	0.21
E	ND (<0.00075)	0.13
X	ND (<0.00225)	0.41
PCE	0.0011	ND (<0.00065)

WORK AREA 2
2,500-GALLON UST

EXTERIOR WALL

DOOR

REPAIR SHOP AREA

INTERIOR WALL

DPT-7	8-FT	14-FT
GRPH	ND (<7.2)	250
DRPH	ND (<36)	310
ORPH	ND (<72)	730
B	0.027	ND (<0.093)
T	0.13	ND (<0.46)
E	0.025	3.0
X	0.101	13.3
PCE	0.0015	ND (<0.093)



SCALE: 1" = 5'

⊗ 2008 RI DPT SOIL SAMPLE LOCATION

⊕ PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATION. SAMPLE LOCATIONS MAY CHANGE BASED UPON FIELD OBSERVATIONS

GRPH - GASOLINE-RANGE PETROLEUM HYDROCARBONS

DRPH - DIESEL-RANGE PETROLEUM HYDROCARBONS

ORPH - OIL-RANGE PETROLEUM HYDROCARBONS

BTEX - BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES

ND NOT DETECTED ABOVE THE COMPOUND-SPECIFIC LABORATORY DETECTION LIMIT

BOLD BOLD INDICATES THE CONCENTRATION WAS DETECTED ABOVE THE COMPOUND SPECIFIC LABORATORY DETECTION LIMIT. BOLD AND SHADED INDICATES THE CONCENTRATION EXCEEDED THE MTCM METHOD A SOIL CLEANUP LEVEL

RESULTS IN mg/kg



ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 5

WORK AREA 2 WITH UST LOCATION AND PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATIONS

PROJECT

51201.5

PREPARED FOR

WHITNEY'S CHEVROLET

LOCATION

123 WEST PIONEER AVENUE
MONTESANO, WASHINGTON

SHEET

1 of 1

DRAWN BY

ARM

REVIEWED BY

ELC

DATE

11/09/10

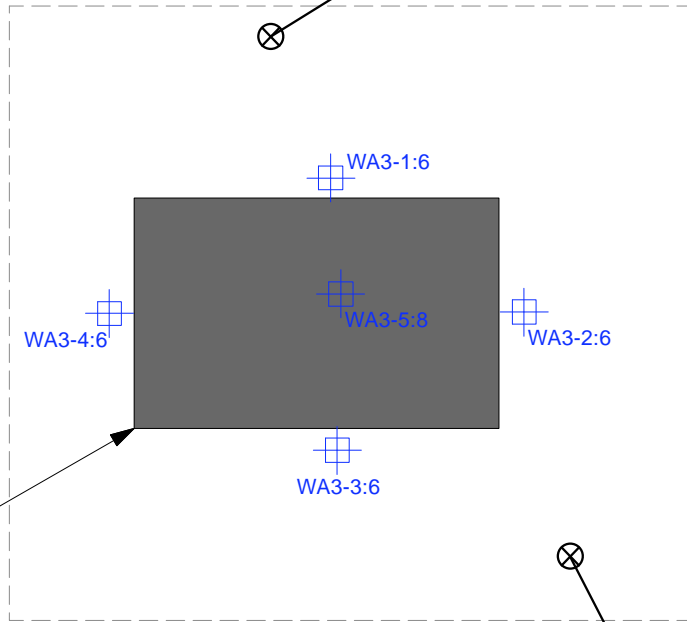
DOOR

DOOR

WCMW-2

DPT-8	4-FT	10-FT	14-FT
GRPH	25	38	ND (<4.3)
DRPH	870	1,300	ND (<28)
ORPH	2,700	16,000	ND (<57)
B	0.36	0.08	0.014
T	2.2	ND (<0.36)	0.023
E	0.8	0.21	0.0096
X	2.9	0.88	0.035
PCE	--	ND (<0.071)	ND (<0.0072)

WCMW-2	7-FT	15-FT
GRPH	ND (<15.0)	ND (<10.0)
DRPH	ND (<530)	87
ORPH	2,600	ND (<63)
B	0.0095	0.19
T	0.015	1.4
E	0.017	2.2
X	0.086	8.4
PCE	0.0047	ND (<0.051)



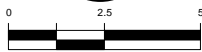
APPROXIMATE FLOOR CUT FOR POTENTIAL WA3 REMEDIAL EXCAVATION

**WORK AREA 3
2,000-GALLON UST**

INTERIOR WALLS

REPAIR SHOP AREA

DPT-9	8-FT	13-FT
GRPH	ND (<7.6)	64
DRPH	ND (<40)	210
ORPH	ND (<79)	2,500
B	ND (<0.00086)	ND (<0.053)
T	ND (<0.0043)	ND (<0.26)
E	ND (<0.00086)	0.33
X	ND (<0.00256)	1.43
PCE	0.0019	ND (<0.053)



SCALE: 1" = 5'

⊗ 2008 RI DPT SOIL SAMPLE LOCATION
 ⊕ PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATION. SAMPLE LOCATIONS MAY CHANGE BASED UPON FIELD OBSERVATIONS
 ⊗ GROUND WATER MONITORING WELL LOCATION. INSTALLED DURING 2008 REMEDIAL INVESTIGATION

GRPH - GASOLINE-RANGE PETROLEUM HYDROCARBONS
 DRPH - DIESEL-RANGE PETROLEUM HYDROCARBONS
 ORPH - OIL-RANGE PETROLEUM HYDROCARBONS
 BTX - BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES
 ND - NOT DETECTED ABOVE THE COMPOUND-SPECIFIC LABORATORY DETECTION LIMIT

BOLD BOLD INDICATES THE CONCENTRATION WAS DETECTED ABOVE THE COMPOUND SPECIFIC LABORATORY DETECTION LIMIT. BOLD AND SHADED INDICATES THE CONCENTRATION EXCEEDED THE MTCA METHOD A SOIL CLEANUP LEVEL

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

FIGURE 6

WORK AREA 3 WITH UST LOCATION AND PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATIONS

PROJECT	51201.5		
PREPARED FOR	WHITNEY'S CHEVROLET		
LOCATION	123 WEST PIONEER AVENUE MONTESANO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ELC	11/09/10

WCMW-3	6-FT	15-FT
GRPH	ND (<6.4)	ND(<4.6)
DRPH	ND (<35)	ND (30)
ORPH	ND (<69)	ND (<60)
B	ND (<0.00088)	0.023
T	ND (<0.0044)	0.016
E	0.0017	0.012
X	0.0087	0.065
PCE	ND (<0.00088)	ND (<0.00072)

DPT-9	10-FT	14.5-FT
GRPH	ND (<8.9)	ND (<4.3)
DRPH	ND (<1,800)	ND (<27)
ORPH	7,100	ND (<54)
B	ND (<0.0010)	0.0041
T	ND (<0.0052)	0.0088
E	0.0025	0.011
X	0.1099	0.079
PCE	0.0025	ND (<0.00071)

INTERIOR WALL

REPAIR SHOP AREA

INITIAL FLOOR CUT FOR POTENTIAL WA4 REMEDIAL EXCAVATION

AUTO PARTS AREA

INTERIOR WALL

PAINT BOOTH

WORK AREA 4
1,000-GALLON UST

DPT-11	10-FT	14.5-FT
GRPH	ND (<10.0)	ND (<5.2)
DRPH	ND (<2,000)	ND (<31)
ORPH	9,500	ND (<63)
B	ND (<0.0015)	ND (<0.0025)
T	ND (<0.0074)	ND (<0.013)
E	ND (<0.0015)	ND (<0.0025)
X	ND (<0.0045)	ND (<0.0075)
PCE	ND (<0.0015)	ND (<0.0025)

INTERIOR WALL

BODY SHOP



SCALE: 1" = 5'

⊗ 2008 RI DPT SOIL SAMPLE LOCATION
 ⊕ PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATION. SAMPLE LOCATIONS MAY CHANGE BASED UPON FIELD OBSERVATIONS
 ⊕ GROUND WATER MONITORING WELL LOCATION. INSTALLED DURING 2008 REMEDIAL INVESTIGATION
 GRPH - GASOLINE-RANGE PETROLEUM HYDROCARBONS
 DRPH - DIESEL-RANGE PETROLEUM HYDROCARBONS
 ORPH - OIL-RANGE PETROLEUM HYDROCARBONS
 BTEX - BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES
 ND NOT DETECTED ABOVE THE COMPOUND-SPECIFIC LABORATORY DETECTION LIMIT
BOLD BOLD INDICATES THE CONCENTRATION WAS DETECTED ABOVE THE COMPOUND SPECIFIC LABORATORY DETECTION LIMIT. BOLD AND SHADED INDICATES THE CONCENTRATION EXCEEDED THE MTCA METHOD A SOIL CLEANUP LEVEL



295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 7

WORK AREA 4 WITH UST LOCATION AND PROPOSED UST ASSESSMENT SOIL SAMPLE LOCATIONS

PROJECT

51201.5

PREPARED FOR

WHITNEY'S CHEVROLET

LOCATION

123 WEST PIONEER AVENUE
MONTESANO, WASHINGTON

SHEET

1 of 1

DRAWN BY

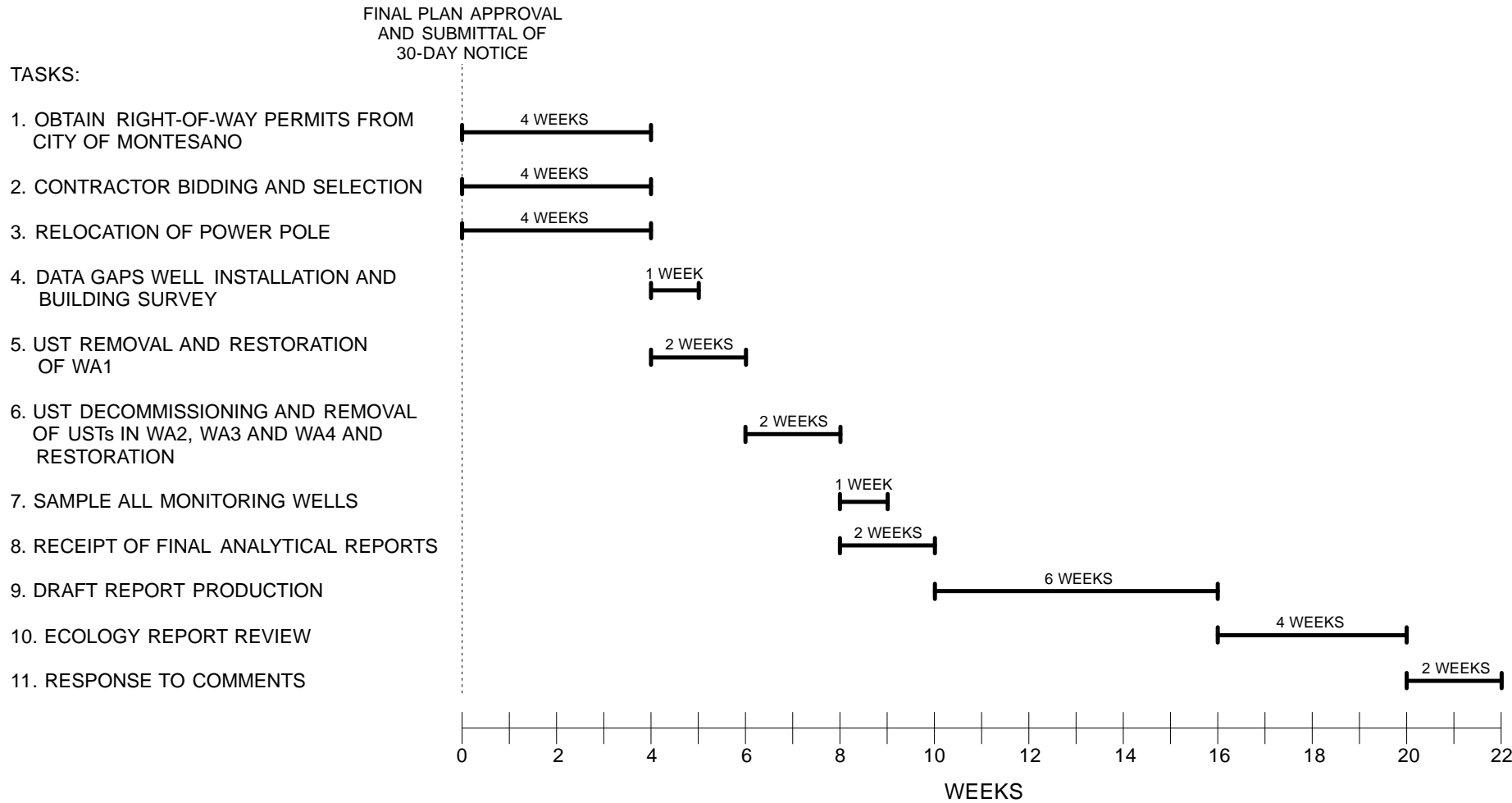
ARM

REVIEWED BY


ELC

DATE

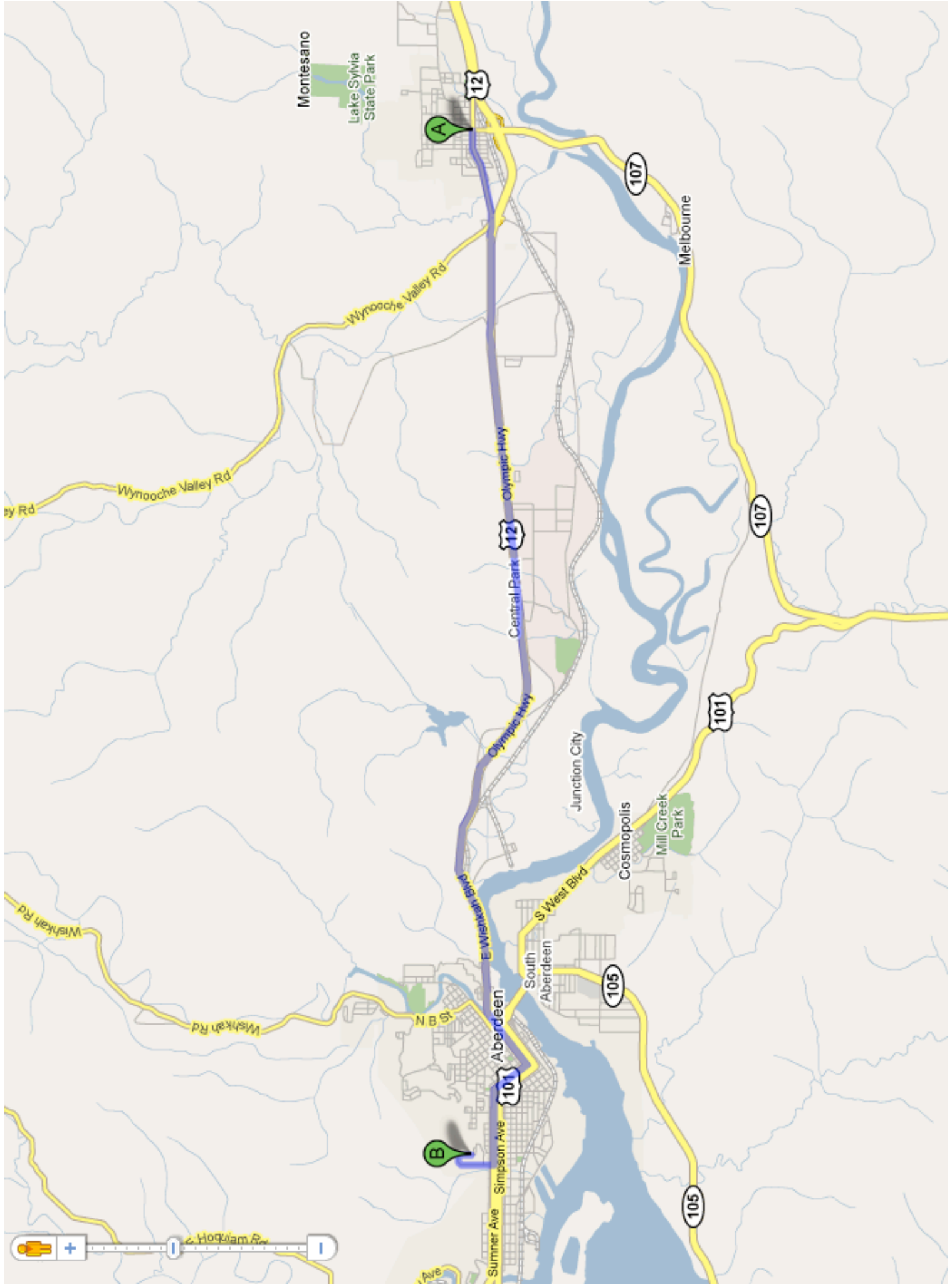
11/09/10



* PROJECT SCHEDULE IS DEPENDENT UPON CONTRACTOR AVAILABILITY, LABORATORY ANALYTICAL RESULTS, AND SITE ACCESS.

 ENVIRONMENTAL PARTNERS INC 295 NE Gilman Boulevard, Suite 201 Issaquah, Washington 98027 FIGURE 8 PROJECT WORK SCHEDULE	PROJECT		51201.5	
	PREPARED FOR		WHITNEY'S CHEVROLET	
	LOCATION		123 WEST PIONEER AVENUE MONTESANO, WASHINGTON	
	SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ELC	11/09/10	

Attachment
Route Map to Grays
Harbor Community Hospital



Montesano

Lake Sylvia State Park

12

A

107

Melbourne

Winoche Valley Rd

Winoche Valley Rd

12

Olympic Hwy

Olympic Hwy

107

101

Junction City

Cosmopolis

Mill Creek Park

E Winoche Valley Rd

S West Blvd

105

S B N

Aberdeen

South Aberdeen

101

B

Simpson Ave

105



Hogiam Ave




Directions to 915 Anderson Dr, Aberdeen, WA 98520-1097
13.0 mi – about 21 mins


You can enter notes here.

Save trees. Go green!
Download Google Maps on your phone at google.com/gmm



 123 W Pioneer Ave, Montesano, Grays Harbor, Washington 98563

- | | |
|---|----------------------------|
| 1. Head west on W Pioneer Ave toward S 1st St
About 2 mins | go 1.1 mi
total 1.1 mi |
|  2. Take the ramp on the left onto Olympic Hwy/US-12
Continue to follow US-12
About 13 mins | go 9.4 mi
total 10.5 mi |
|  3. Continue on US-101 W/E Wishkah St
About 1 min | go 0.6 mi
total 11.0 mi |
|  4. Turn right at S Alder St/US-101 W
Continue to follow US-101 W
About 3 mins | go 1.3 mi
total 12.3 mi |
|  5. Turn right at Oak St
About 1 min | go 0.2 mi
total 12.6 mi |
| 6. Continue on Anderson Dr
About 1 min | go 0.4 mi
total 13.0 mi |

 915 Anderson Dr, Aberdeen, WA 98520-1097