Ultra Custom Care Cleaners Site

Remedial Investigation and Feasibility Study

Prepared for

City of Bothell
18415 101st Ave NE
Bothell, WA 98011

November 2022

FINAL

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The interpretations and conclusions contained in this report are based in part on site characterization data collected by others and provided by the City of Bothell. Floyd|Snider cannot assure the accuracy of this information.

Remedial Investigation and Feasibility Study

This document was prepared for
the City of Bothell
under the supervision of:

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Date: November 28, 2022

Executive Summary

INTRODUCTION

The Ultra Custom Care Cleaners Site (Site) is in the downtown corridor of Bothell, Washington. From the 1950s until 2012, dry cleaning operations were conducted at buildings located at the source property on the northeast corner of Bothell Way NE and NE 183rd Street. Dry cleaning operations were historically performed by Raincheck Cleaners and Laundry, NuLife Cleaners, and Ultra Custom Care Cleaners. In February 2012, the City of Bothell (City) acquired the property and demolished the existing building. The source property has been vacant ever since.

An investigation in 2002 identified chlorinated volatile organic compounds (cVOCs) in groundwater in the vicinity of the dry-cleaning business. This investigation prompted Washington State Department of Ecology's (Ecology's) listing of the Site to its Confirmed and Suspected Contaminated Sites List (CSCSL) in 2007. The City entered into Agreed Order No. DE 9704 with Ecology on April 18, 2013, to perform a cleanup at the Site (Ecology 2013).

Numerous environmental investigations have been conducted to characterize soil and groundwater quality at the Site following the initial investigation in 2002. Additionally, the City has completed multiple interim actions to improve groundwater quality at the Site. Following these interim actions and investigations, the City prepared draft and revised draft Remedial Investigation and Feasibility Study (RI/FS) documents in 2013, 2017, and 2018 (HWA 2013, 2017, 2018a) to summarize Site data and determine cleanup goals. Ecology requested additional data collection and characterization to ensure Site boundaries were fully delineated. Data Gaps Investigation (DGI) field activities were conducted beginning in spring of 2020 and completed in fall of 2020.

The RI portion of this report describes soil and groundwater quality at the site, develops the conceptual site model (CSM), and proposes cleanup standards for chemicals of concern (COCs) at the site. This RI describes the boundary of the "Site," defined by Model Toxics Control Act (MTCA) as where contamination has come to lie (Washington Administrative Code [WAC] 173-340-200). The Feasibility Study portion of this report develops the remedial action objectives (RAOs), provides a comprehensive evaluation of alternative cleanup actions, and identifies a sitewide preferred cleanup action.

Sections 1.0 through 3.0 present hydrogeologic and other information about the Property and describe the investigations used for Site characterization. Sections 4.0 through 7.0 present the results of Site characterization, including development of the CSM, identification of COCs, and delineation of areas of concern (AOCs).

SITE DESCRIPTION

The majority of the ground surface at the Site is covered by buildings or pavement, including multiple parking lots, City roadways, and rights-of-way. Surface topography is relatively flat, with a slope slightly to the south. Soil across the Site generally consists of stratified deposits of silt, sand, and gravels of varying density. Groundwater is typically encountered between 5 and 8 feet below ground surface (bgs) with a hydraulic gradient to the south-southwest. Groundwater is considered potable per WAC 173-340-720(2).

CONCEPTUAL SITE MODEL

Based on RI sampling and analysis, the two media of concern at the Site are soil and groundwater. Groundwater cleanup standards are protective of human health via drinking water exposure and vapor intrusion into commercial buildings. Soil cleanup standards are protective of groundwater and human exposure via the direct contact pathway. Ecological receptors are not exposed to soil contamination at levels of concern. Former Site uses resulted in contamination at the Site. Potential sources of contamination include the following:

- Direct releases from dry cleaning operations or during material storage, use, and handling
- Infiltration of precipitation and overland flow through contaminated soil, causing leaching into groundwater

Chlorinated solvents are the primary chemicals of concern at the Site in both soil and groundwater. Additionally, arsenic is a groundwater COC in areas where interim measures altered subsurface geochemistry. A limited amount of total petroleum hydrocarbons contamination is present in subsurface soil downgradient of the source property and its presence is associated with releases unrelated to former drycleaner activities at the Site.

Based on the nature and extent of soil and groundwater COC contamination, four AOCs were identified at the Site. The source property, where the dry-cleaning solvent was originally released, is an AOC that contains soil and groundwater contamination. Other AOCs represent downgradient areas where contamination has migrated in the direction of groundwater flow. The Site boundary encompasses all areas where contamination originating from Site activities has come to lie.

The CSM is complete with respect to identification of current and potential future active contaminant transport and exposure pathways. However, certain soil samples indicating the presence of contamination are more than five years old and may no longer be representative of subsurface conditions. Additional sampling may be completed as part of remedial design to confirm the extent of soil that exceeds cleanup levels (CULs).

DEVELOPMENT OF CLEANUP ACTION ALTERNATIVES

A range of remedial technologies were reviewed and considered to address both soil and groundwater contamination at the Site. The technologies that were retained have been aggregated into four cleanup action alternatives, which include combinations of the following:

- Excavation of soil with concentrations of soil greater than CULs
- In Situ groundwater treatment by activated carbon and zero-valent iron (ZVI)
- In Situ groundwater treatment by bioremediation

- Institutional controls (ICs)
- Post-remedy monitored natural attenuation of groundwater

EVALUATION OF CLEANUP ALTERNATIVES—DISPROPORTIONATE COST ANALYSIS

The MTCA cleanup regulations provide the framework for the disproportionate cost analysis (DCA; refer to WAC 173-340-360 (3)(e)(ii)). The DCA evaluates cleanup action alternatives to identify the cleanup action that uses permanent solutions to the maximum extent practicable, while also achieving cleanup standards within a reasonable restoration time frame. In making this determination, each cleanup action alternative was assessed using MTCA comparative evaluation criteria as follows:

- Protectiveness (30% of total benefit score)
- Permanence (20% of total benefit score)
- Effectiveness over the long term (20% of total benefit score)
- Management of short-term risks (10% of total benefit score)
- Technical and administrative implementability (10% of total benefit score)
- Consideration of public concerns (10% of total benefit score)
- Cost (compared to total benefit score)

Under the MTCA cleanup regulations, cleanup action alternatives must meet minimum requirements for protectiveness. The final step in evaluating alternatives is identifying the protective alternative that is permanent to the maximum extent practicable. This requires weighing incremental costs and benefits of protective cleanup action alternatives. Costs are considered disproportionate to benefits when the incremental costs of an alternative exceed the incremental benefits compared to alternatives that are lower cost but still protective.

PREFERRED CLEANUP ACTION

The four alternatives were evaluated, and the preferred cleanup action was selected by choosing the alternative with the greatest benefit per unit cost score. Alternative 3 was selected as the Preferred Cleanup Action Alternative as it is permanent to the maximum extent practicable.

The Preferred Cleanup Action Alternative is a comprehensive remedy for the Site that complies with all the applicable remedy selection requirements under MTCA and provides the greatest environmental benefit for the associated cost based on the DCA. This remedy includes the following components:

- Excavation of soil with PCE concentrations exceeding CULs on the source property
- Excavation amendment in the deepest source area excavation by mixing soil with sulfidated micro-ZVI (S-MZVI) to facilitate destruction of cVOCs through chemical

reaction and stimulate anaerobic biological degradation by creating reducing condition

- In Situ treatment of shallow and deep downgradient groundwater by injection of targeted barriers consisting of liquid activated carbon (PlumeStop) and S-MZVI to adsorb and facilitate destruction of cVOCs in groundwater
- Monitored natural attenuation of groundwater following excavation and PlumeStop and S-MZVI injection
- ICs to control exposures to soil contamination left in place in City right-of-way

The Preferred Cleanup Action Alternative for soil and groundwater meets the minimum requirements for selection of a cleanup action under MTCA (WAC 173-340-360(2)(a)) because it is protective of human health and the environment, complies with cleanup standards, complies with applicable state and federal laws, and provides for compliance monitoring. The Preferred Cleanup Action Alternative meets the other MTCA requirements for selection of a cleanup action, including using permanent solutions to the maximum extent practicable, providing for a reasonable restoration time frame, and consideration of public concerns.

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List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
AO	Agreed Order
AOC	Area of concern
ARAR	Applicable or relevant and appropriate requirement
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CCMP	Construction Compliance Monitoring Plan
CD	Consent decree
CFR	Code of Federal Regulations
City	City of Bothell
COC	Chemical of concern
COPC	Chemical of potential concern
CSCSL	Confirmed and Suspected Contaminated Sites List
CSM	Conceptual site model
CUL	Cleanup level

Acronym/ Abbreviation	Definition
cVOC	Chlorinated volatile organic compound
CY	Cubic yard
DCE	Dichloroethene
DGI	Data Gaps Investigation
Dhc	*Dehalococcoides*
DRO	Diesel-range organic
Ecology	Washington State Department of Ecology
EOS	Emulsified vegetable oil substrate
ERD	Enhanced reductive dechlorination
ERH	Electrical Resistance Heating
ESA	Environmental Site Assessment
FOE	Frequency of exceedance
FS	Feasibility Study
GMP	Groundwater Monitoring Plan
GRO	Gasoline-range organic
HASP	Health and Safety Plan
HVOC	Halogenated volatile organic compound
HWA	HWA GeoSciences, Inc.
IAWP	Interim Action Work Plan
IC	Institutional control
ISTR	In situ thermal remediation
kg	Kilogram
Koc	Organic carbon partitioning coefficient
LTCMP	Long-term compliance monitoring plan
MCL	Maximum contaminant level
MCLG	Maximum contaminant level goal
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
MIP	Membrane interface probe
MNA	Monitored Natural Attenuation
MTCA	Model Toxics Control Act
ORO	Oil-range organic

Acronym/ Abbreviation	Definition
PCE	Tetrachloroethene
POC	Point of compliance
PRB	Permeable reactive barrier
Preferred Alternative	Preferred Cleanup Action Alternative
PVI	Petroleum Vapor Intrusion
QA	Quality assurance
QC	Quality control
RAO	Remedial action objective
REC	Recognized environmental condition
RI/FS	Remedial Investigation and Feasibility Study
ROW	Right-of-way
SEE	Steam Enhanced Extraction
Site	Ultra Custom Care Cleaners Site
SL	Screening level
S-MZVI	Sulfidated micro zero-valent iron
Speedy Glass	Speedy Auto Glass
SVE	Soil vapor extraction
TCE	Trichloroethene
TCH	Thermal Conduction Heating
TEE	Terrestrial Ecological Evaluation
TOC	Total organic carbon
TPH	Total petroleum hydrocarbons
UST	Underground storage tank
VcrA	Vinyl chloride reductase
VI	Vapor Intrusion
VOC	Volatile organic compound
WAC	Washington Administrative Code
ZVI	Zero-valent iron

1.0 Introduction

This Remedial Investigation and Feasibility Study (RI/FS) report was prepared pursuant to the requirements of Agreed Order (AO) No. DE 9704 (Ecology 2013) between the Washington State Department of Ecology (Ecology) and the City of Bothell (City). The Ultra Custom Care Cleaners Site (Site) is located in the downtown corridor of Bothell, Washington (Figure 1.1). The Site is included on Ecology's Confirmed and Suspected Contaminated Sites List (CSCSL) under Facility Site ID 379891 and Cleanup Site ID 3172.

From the 1950s through 1967, Raincheck Cleaners and Laundry occupied the former building at the southwest corner of what is now an empty lot on the City's Municipal and City Hall Campus. In 1967, the Raincheck Cleaners and Laundry building was demolished, and a new building was constructed. The new building was occupied by NuLife Cleaners, followed by Ultra Custom Care Cleaners.

An investigation (described in Section 2.3) in 2002 identified chlorinated volatile organic compounds (cVOCs) in groundwater in the vicinity of the dry-cleaning business that prompted Ecology's listing of the Site to the CSCSL and numerous environmental investigations, until the City acquired the property in February 2012 and demolished the existing building. The City entered into an AO with Ecology on April 18, 2013, to perform a cleanup at the Site (Ecology 2013). In 2016 and 2018, the City prepared draft and revised RI/FS documents (HWA 2017a, 2018a) to summarize Site data and establish cleanup goals; however, Ecology subsequently requested additional data collection and characterization of the Site. Data Gaps Investigation (DGI) field activities were conducted per the approved DGI Work Plan (Floyd|Snider 2020a), beginning in spring of 2020 and completed in fall of 2020.

1.1 PURPOSE AND OBJECTIVES OF THIS REPORT

The purpose of this report is to present an RI/FS consistent with the requirements of the Model Toxics Control Act (MTCA) cleanup regulation (Chapter 173-340 of the Washington Administrative Code [WAC]). This report fulfills the following objectives:

- Fully describe soil and groundwater quality at the Site using all available data
- Evaluate complete exposure pathways to receptors at the Site for analytes of interest found in the environmental media listed earlier
- Present a Conceptual Site Model (CSM)
- Establish cleanup standards including:
  - Defining cleanup levels (CULs) appropriate to the Site chemicals of concern (COCs) per MTCA (WAC 173-340-700(3))
  - Proposing points of compliance for each medium where CULs will be met
- Develop cleanup action alternatives that protect human health and the environment
- Evaluate cleanup action alternatives using MTCA criteria (WAC 173-340-360), including disproportionate cost analysis

1.2 DOCUMENT ORGANIZATION

The RI sections of this document are organized as follows:

- **Section 1.0—Introduction:** Provides the purpose and objectives, regulatory overview for the site, and organization of the RI/FS report.
- **Section 2.0—Site Background and Setting:** Provides information on the location, ownership, and historical and current land use at study area for the site, as well as regional and site geology and ecological setting.
- **Section 3.0—Summary of Investigations and Interim Actions:** Describes soil and groundwater investigations that have been conducted in the study area, including summarizing historical investigations and recent investigations conducted as part of the RI. Identifies chemicals of interest for the site based on prior investigations. Describes both redevelopment and cleanup actions completed in the study area and interim actions completed at the site.
- **Section 4.0—Conceptual Site Model:** Presents the CSM, including media of concern, exposure pathways, and receptors.
- **Section 5.0—Determination of Cleanup Standards and Chemicals of Concern:** Identifies site screening levels (SLs) used to identify chemicals of potential concern (COPCs). Presents site-specific CULs and points of compliance (POCs), which are used to identify chemicals of concern.
- **Section 6.0—Nature and Extent of Contamination:** Presents a description of type, concentration, and extent of contamination for both soil and groundwater.
- **Section 7.0—Areas of Concern and Feasibility Study Considerations**: Summarizes the areas of concern (AOCs) for the site and the findings and conclusions of the RI that are considered in the Feasibility Study (FS) portion of this document.

The FS sections of this document are organized as follows:

- **Section 8.0—Feasibility Study:** Presents purpose of the FS portion of the document and outlines remedial action objectives (RAOs) for the site. Summarizes key features of the AOCs, including factors that affect remedial design.
- **Section 9.0—Remedial Technology Identification and Screening:** Describes active and passive remedial technologies potentially applicable to address the site COCs in impacted media. Screens out technologies that are not suitable for the site based on technological considerations relevant to the site.
- **Section 10.0—Identification of Cleanup Action Alternatives:** Assembles the technologies retained in Section 9.0 into cleanup action alternatives to address soil and groundwater contamination.

- **Section 11.0—Alternatives Evaluation and Disproportionate Cost Analysis:** Evaluates cleanup action alternatives developed for the Site in Section 10.0 against the MTCA requirements for a cleanup action.
- **Section 12.0—Recommendation for the Preferred Alternative:** Describes the Preferred Cleanup Action Alternative (Preferred Alternative) for the remediation of soil and groundwater, illustrating how the Preferred Alternative meets MTCA requirements and incorporates consideration of all applicable or relevant and appropriate requirements (ARARs) for the site.
- **Section 13.0—References:** Presents the sources cited in the RI/FS report.

2.0 Site Background and Setting

This section describes the Ultra Custom Care Cleaners Site, including the site's physical and environmental setting, a brief history of pollutant-generating activities, and the circumstances surrounding the site's identification as a MTCA cleanup site.

2.1 SITE DEFINITION AND DESCRIPTION OF STUDY AREA

In this report, the term source property is used to refer to the address 18304 Bothell Way NE. However, the "Site" is not defined by an address or property boundary under MTCA, but rather defined by the extent of contamination before cleanup activities began (WAC 173-340-200). Therefore, the Site includes the source property and any adjacent or downgradient properties impacted and will be defined in Section 6.0 (Nature and Extent of Contamination).

The study area in this RI/FS includes any area with soil and or groundwater potentially impacted by the Ultra Custom Care Cleaners facility. This is assumed, based on historical data, to cover approximately three city blocks and more than 4.5 acres of land located in the central downtown area of Bothell. The study area generally excludes adjacent sites (discussed in Section 2.5) where soil and groundwater quality are representative of other sources of contamination; however, the boundary of some of the adjacent sites overlap with the study area. The study area and adjacent cleanup sites are shown on Figure 2.1.

2.2 PROPERTY LOCATION, DESCRIPTION, AND ZONING

The property containing the source of contamination is owned by the City and located at 18304 Bothell Way NE, southwest of Bothell City Hall. The source property is approximately 0.25 acres in size and consists of tax parcel 072605-9003 and a portion of tax parcel 072605-9191. The Site is within Bothell's Downtown Core District Zone. Current land use within the Downtown Core in the vicinity of the Site includes both commercial and residential use. The City anticipates future development in the vicinity of the Site will include commercial and residential use, consistent with its long-term development plans. The City owns the source property and two additional blocks downgradient of the source property, as shown on Figure 2.2. Buildings and businesses in the vicinity of the Site are also identified on Figure 2.2.

To the west of the source property, across Bothell Way NE, is a recently constructed apartment building. South of the source property, across NE 183rd Street, are commercial properties occupied by Ranch Drive-In restaurant, Washington Federal (bank), Speedy Auto Glass (Speedy Glass), and Hillcrest Bakery. Farther south, past Main Street, lies an empty City-owned lot (Lot E, F, G) and additional commercial properties including Baskin-Robbins.

2.3 SITE BACKGROUND AND REGULATORY OVERVIEW

Following an investigation completed in 2002, Farallon Consulting LLC notified Ecology of the presence of tetrachloroethene (PCE) and its breakdown products trichloroethene (TCE) and *cis*-1,2-dichloroethene (DCE) in groundwater in the vicinity of the source property. Ecology listed the Site on its CSCSL and sent an Early Notice letter to the owners of the Site to advise them of the listing on November 1, 2002. Subsequently, various environmental investigations took place between 2002 and 2012, when the City acquired the property. These previous investigations are summarized in Section 3. Many of these previous investigations have been performed as independent remedial actions and document the release of hazardous substances at the Site. As a result, the City agreed to clean up the Site and entered into an AO with Ecology in April 2013. This AO required the City to conduct an RI/FS, perform an interim action, and submit a draft cleanup action plan for the Site. Following execution of the AO, the City had performed several subsurface investigations and prepared several Interim Action Work Plans to delineate the Site. In 2016 and 2018, the City prepared a draft and revised draft RI/FS to summarize Site data and support cleanup goals.

Following submission of the draft RI/FS in 2018, Ecology requested that the City perform additional Site characterization to confirm the nature and extent of contamination in groundwater downgradient of the source property. In 2019 the City evaluated all historical data associated with the Site to identify data gaps and in 2020, prepared a DGI Work Plan and performed a DGI field investigation. The DGI activities were intended to collect the necessary information requested by Ecology to supplement and finalize the RI/FS required by the AO.

2.4 CURRENT AND HISTORICAL PROPERTY OWNERSHIP, DEVELOPMENT, AND OPERATIONS

Contamination at the Site originated from historical dry-cleaning operations on the source property, a lot approximately 0.25 acres in size at the north end of the Site (Figure 2.3). The original building at the source property was located on the southwestern portion of the lot and was built in 1948. Raincheck Cleaners and Laundry occupied this building from the 1950s through 1967.

In 1967, the Raincheck Cleaners and Laundry building was demolished, and a new building was constructed. The new building was occupied by NuLife Cleaners, followed by Ultra Custom Care Cleaners. Concurrent with Ultra Custom Care Cleaners, two other businesses conducted operations in the new building: Franks Hair Design, a hair salon, and the Laundry Basket, a laundromat.

The City acquired the source property within the Site in February 2012 as part of the Downtown Redevelopment Plan, in order to accommodate expansion of the City Hall municipal campus. The former building housing Ultra Custom Care Cleaners was demolished in June 2013. Additional redevelopment work, including road realignment, within the Site boundary took place in 2016. Figure 2.3 shows the footprint of historical dry-cleaning buildings on the source property on an aerial from 2005, prior to the completion of City redevelopment in the downtown core.

The source property remains vacant at the southwest corner of the City Hall campus. It is almost entirely covered by concrete or pavement. Adjacent parcels north and east of the source property are vegetated.

2.5 ADJACENT PROPERTIES

The Site is located upgradient of several other cleanup sites listed in Ecology's CSCSL, as shown on Figure 2.1. These include the Bothell Hertz site, Bothell Landing site, and Bothell Riverside total petroleum hydrocarbon (TPH) and halogenated volatile organic compound (HVOC) sites south and downgradient of the Site. The properties of these adjacent sites are predominantly City owned. One of the goals of this RI/FS is to determine the extents of the groundwater plume associated with the Site and the Site's location compared to the surrounding Washington MTCA cleanup sites.

2.6 PHYSICAL ENVIRONMENT

The source property lies at approximately 46 feet North American Vertical Datum of 1988 (NAVD 88), and the Site generally slopes gently downward from north to south toward the Sammamish River. Volatile organic compounds (VOCs) suspected to be migrating from the source area have been found in groundwater beneath the public rights-of-way (ROWs), City-owned parcels, and private parcels farther south between Main Street and Woodinville Drive/SR-522.

2.6.1 Site Geology

Bothell lies within the central portion of the Puget Lowland, an elongated topographic and structural depression bordered to the east by the Cascade Mountains and to the west by the Olympic Mountains. This lowland is characterized by a series of north and south-trending ridges separated by deeply cut ravines, broad valleys, and elongated water bodies. These ridges, valleys, and deep water bodies are the result of glacial scouring and subglacial erosion.

According to the Washington State Department of Natural Resources Geologic Information Portal, the downtown corridor where the Site lies is underlain by glacial recessional and advance outwash, glacial till, and alluvium. Glacial outwash consists of varying stratified deposits of silt, sand, and gravels. These recessional and advance outwash deposits were also identified in geotechnical borings associated with the SR-522 Bothell Crossroads Project (HWA 2018b). Glacial till is a compact mixture of silt, sand, and gravel with a diamict-like texture. The alluvium predominantly consists of sands and silts deposited by running water associated with the deposition caused by the nearby Sammamish River. Alluvium also includes localized peat lenses that have been identified in several borings (HWA 2018b). Figures 2.4 and 2.5 present plan location and section view of a geologic cross section trending north-south across a portion of the Site.

2.6.2 Site Hydrogeology

Groundwater at the Site is generally encountered between 5 to 13 feet below ground surface (bgs) and generally becomes shallower toward the Sammamish River. Based on groundwater level data in the 2018 Draft RI/FS, the groundwater is understood to flow generally southward (HWA 2018a). A synoptic water level event was performed in accordance with the DGI Work Plan on July 20, 2020, with groundwater contours and estimated flow direction (south to southeast) presented for the most recent July measurements in Figure 2.6. Depth to water level measurements, top-of-casing elevations, and groundwater elevations are included in Table 2.1. Based on existing Site monitoring well intervals and boring logs and for the purposes of this RI/FS, the first water bearing unit below the Site has been split into two zones:

- Shallow: Between approximately 5 and 25 feet bgs
- Deep: Approximately 25 feet bgs and deeper

Monitoring wells screened in the deep aquifer zone are identified by a "D" suffix appended to the monitoring well ID. The bottom of the deep water bearing zones is delineated by compact glacial till at depths ranging from approximately 40 to 60 feet bgs at the Site, which then acts as a confining layer for groundwater.

3.0 Summary of Investigations and Interim Actions

The Site and the surrounding area have been well studied as a result of development activities and following Ecology's initial listing of the Site on the CSCSL.

Historical sampling locations from previous investigations that were used in this RI/FS to characterize the Site are shown on Figure 3.1. It presents soil sampling locations where results are believed to be representative of soil remaining in place and groundwater sampling locations within the study area. Sampling locations that represent soil and groundwater quality at adjacent cleanup sites that are outside the study area or that do not provide data that assist with determination of the Site extent are omitted from this figure.

The location and status of monitoring wells are shown on Figure 3.2. Injection well and injection probe locations as well as injection event sequencing are also presented in Figure 3.2. Information about each historical sampling event—including the event year, number of Site locations sampled, and media sampled during the event—is summarized in Figure 3.3. The analytical schedule associated with groundwater and soil sampling during each major phase of investigation at each site is summarized in Figures 3.4 and 3.5, respectively.

Below is a summary of the major investigations conducted within the study area. Listed first are the initial site investigations documenting suspected release of contamination at the Site, followed by additional investigations to bound the Site, and the most recent investigations conducted in 2020 to address the data gaps at the Site.

3.1 PREVIOUS INVESTIGATIONS AND INTERIM ACTIONS

More than 25 reports summarizing the results of prior environmental investigations were referenced to compile the historical soil and groundwater environmental dataset. Reference information for each of these reports is listed in Appendix A. Data were also gathered from Environmental Information Management and electronic data deliverables provided by HWA GeoSciences, Inc. (HWA), for more recent soil and groundwater monitoring events.

The investigation activities summarized below have been organized based on age of data, interim actions, and how the data from the investigations are used in this RI/FS.

3.1.1 Pre-2009 Investigations: Preliminary Site Assessment

In 2001, an initial Phase I Environmental Site Assessment (ESA) conducted by EHS International identified recognized environmental conditions (RECs) at the site, including chemical storage and potentially contaminated soil and groundwater from historical dry-cleaning operations and use of underground storage tanks (USTs; HWA 2018b). This prompted a Phase II ESA that confirmed the presence of contaminated soil and groundwater beneath the Site (Farallon 2002). Because of the confirmed release of hazardous substances, Ecology added the Site to the CSCSL and several more investigations were performed as independent cleanup actions including another Phase I ESA performed by CDM Smith in 2008 prior to the development-related activities described in Section 3.1.2.

Data from these investigations are more than 10 years old and are considered historical for the purposes of this RI/FS. These data were useful for identifying COPCs for further investigation in the RI/FS in the RI/FS Work Plan and were not used for identifying COCs in the RI/FS.

3.1.2 2009–2014 Investigations: Pre-Interim Measure Site Characterization

Between 2009 and 2014, several efforts were made to further characterize the contamination at the Site due to development activities in Bothell's downtown core including planning for ROW improvements, new buildings, and parks. In 2010 the City began the planning phases for the redevelopment of the former City Hall campus, which included investigations to support acquisition of the source property. During these investigations, the presence of cVOCs were confirmed in soil and groundwater beneath the source property, and also detected in groundwater downgradient of the source property. After acquiring the source property in February 2012, the City and Ecology entered into AO DE 9704, dated April 18, 2013, to clean up the Site. As part of the AO requirements, multiple investigations were performed to help define the nature and extent of contamination. A list of reports summarizing the results of these investigations is included in Appendix A.

3.1.3 2014–2016 Investigations: Groundwater Interim Measure Performance

Following previous investigations to characterize subsurface conditions, multiple interim actions were completed to improve soil and groundwater quality and reduce potential exposure risk. Four groundwater interim measures were completed between May 22, 2014, and March 30, 2016. All four of these groundwater interim measures consisted of subsurface injections to reduce concentrations of cVOCs in groundwater. Information about these events was presented in three Interim Action Work Plan (IAWP) reports (LIST) and is summarized in the sections that follow.

3.1.3.1 Chemical Oxidation IMs

The first two groundwater interim actions consisted of chemical oxidation injections designed to target removal of contaminant mass within the source area. In May and August 2014, in situ chemical oxidation was performed on and near the source property. These events were conducted following Ecology approval of IAWPs prepared by HWA. A modified Fenton-based oxidation process (i.e., the ISOTEC process) was selected for use at the site, as described in the first IAWP (HWA 2014a). The chemical oxidation process uses hydrogen peroxide to remove chlorine atoms and cause breakdown of cVOCs. The end-product of the reaction is harmless ethane and ethene gases. These IMs used a relatively dilute hydrogen peroxide (i.e., a 12% hydrogen peroxide solution) and chelated iron as a catalyst in the treatment reaction.

In May 2014, chemical oxidation injections were completed at 51 source area locations. In August 2014, injections were completed at 53 source area locations. As described in HWA's first IAWP, each injection point was assumed to have a 12.5-foot radius of influence. Reagents were injected via direct push technology during both events. Reagents were injected at depths from 6 to 10 feet bgs (2 to 3 feet below the water table) to depths of up to 20 feet bgs. Injection screens were generally 8 feet long.

Performance Monitoring

Groundwater monitoring was conducted at the time of the initial injection to determine baseline conditions. Performance monitoring was conducted both 1 week and 1 month after each injection event. Quarterly groundwater monitoring took place for one year following these IMs to evaluate changes in groundwater conditions.

Performance and quarterly groundwater monitoring wells included six locations downgradient of the injections: UCCMW-1, UCCMW-4D, UCCMW-5, UCCMW-6, UCCMW-7, and BB-3. Additionally, because these IMs took place concurrent with construction of the new City Hall building, groundwater samples were collected from nine upgradient wells. These wells were installed as sentry wells to ensure City Hall construction dewatering activities did not draw in contamination from the Site. Sentry wells included UCCMW-3 and four new well pairs: UCCMW-11 and -11D; UCCMW-12 and -12D; UCCMW-13 and -13D; and UCCMW-14 and -14D. Performance and sentry well locations are shown on Figure 3.2.

Post-injection groundwater monitoring showed that these IMs were ineffective: cVOC concentrations in performance wells did not show measurable reductions from baseline conditions (HWA 2014b).

3.1.3.2 Bioinjection IMs

The second two IMs consisted of in situ injection of bioremediation cultures and chemical reduction reagents. Injection locations installed during these IMs and described in this section are shown on Figure 3.2. Both IMs incorporated two treatment technologies into a single injection substrate:

- Chemical reduction using zero-valent iron (ZVI) to breakdown TCE via abiotic reductive dechlorination.
- Bioremediation to stimulate microbial biological activity and accelerate the breakdown of PCE and other cVOCs via reductive dechlorination. Bioaugmentation is used when the necessary microorganisms are not present at the site, or when the population size is too small to effectively break down contaminants.

For these IMs to be successful, the groundwater aquifer must be reducing and anoxic. Shifting the aquifers geochemical properties to create reducing conditions may alter other geochemical conditions and may result in the release of arsenic from native soils into solution.

To foster the correct geochemical conditions for effective cVOC treatment, the injection substrate used in these IMs included three major components in various proportions:

- **Water and granular ZVI.** This mixture removes chlorine and creates anoxic groundwater conditions, which are defined by ORP less than -100 millivolts and dissolved oxygen less than 0.5 milligrams per liter.
- **Emulsified vegetable oil, micro-ZVI, and dispersant in anaerobic water.** This mixture provides an energy source for the bioaugmentation culture and disperses the

injection substrate into groundwater. Emulsified vegetable oil contains lactate and is an electron donor for dechlorination reaction.

- **Bioaugmentation culture.** The bioaugmentation culture contained *Dehalococcoides* (Dhc) bacteria and other bacteria capable of converting PCE to *cis*-1,2-DCE. Additionally, the culture contained other bacteria capable of fermenting the lactate and emulsified vegetable oil into a form of energy.

First Bioinjection IM

The first bioinjection IM was performed in January 2015. During this IM, six 4-inch-diameter injection wells (INJ1 through INJ6) were installed in the source area, at 10- to 11-foot spacing and screened at depths of 8 to 23 feet bgs. A tracer test was conducted using real-time monitoring of an existing monitoring well 5 feet downgradient of one of the 4-inch injection well locations. The tracer test showed treatment reagents were migrating downwards instead of laterally. Because the IM's objective was to treat the shallow part of the aquifer, the 4-inch-diameter injection wells were not used during the January 2015 IM.

Instead, 11 shallow, 1-inch-diameter polyvinylchloride injection wells (INJ7 through INJ17) were installed in the source area. These 1-inch-diameter injection wells were spaced between 5 to 6 feet apart and were screened from 8 to 13 feet bgs. Bioremediation substrate was injected in the 11 source area injection wells and in three additional downgradient injection rows.

Downgradient injection rows were installed via direct push technology. The first, second, and third downgradient row had 8, 16, and 10 injection locations, each with typical 5 to 6 feet spacing. Each injection location was screened from the top of the water table to a depth of 8 feet below the water table. These screen intervals correspond to depths from 6 to 7 feet bgs to 14 to 15 feet bgs in the first injection row; and 5 to 6 feet bgs to 13 to 14 feet bgs in the second and third injection rows, respectively.

Second Bioinjection IM

The second bioinjection IM was completed in April 2016. During this IM, bioremediation substrate was injected in the source area (five existing injection wells and 10 new direct push injections) and in three downgradient injection rows via 13, 17, and 25 location direct push injections. The location and depths of these bioinjection rows were designed to target wells that did not have satisfactory remedial outcomes following the first bioinjection IM (HWA 2016). These screen intervals used during this event were similar to the screen intervals used in the first bioinjection event. Generally, screen intervals during the second event are assumed to correspond to depths of 6 to 7 to 14 to 15 feet bgs in the first injection row; and 5 to 6 to 13 to 14 feet bgs in the second and third injection rows, respectively.

Performance Monitoring

Quarterly performance groundwater monitoring was completed following each bioinjection IM. In addition to quantifying changes in cVOC concentrations, this monitoring was performed to show that appropriate groundwater aquifer conditions were achieved for both continued contaminant degradation and survival of the bioaugmentation culture. Samples from all groundwater wells were analyzed for cVOCs and field parameters. Select samples collected from wells immediately downgradient of injection locations were also analyzed for:

- Total organic carbon (TOC)
- Dissolved gases (methane, ethene, and ethane)
- Conventionals (nitrate; sulfate; soluble ferrous iron, and sodium)
- Vinyl chloride reductase (VcrA)

The purpose and use of field parameters, TOC, dissolved gases, VcrA, and conventionals data in evaluating IM performance is described in HWA's second IAWP (HWA 2014b).

3.1.4 Post-2016 Investigations: Post-Interim Measure Conditions

Quarterly groundwater monitoring results collected at the Site beginning in May 2016 represent groundwater quality following completion of the April 2016 bioinjection IM.

Additional historical soil and groundwater sampling events completed between April 2016 and April 2018 are summarized in Table 3.1 These events are described as follows:

- In May 2016, a soil sampling event was conducted on the source property to characterize shallow soil concentrations nearby and upgradient of contaminated source area groundwater wells. Sampling was conducted relative to a prospective purchase of an adjacent property.
- In June 2016, one direct push groundwater location along the southeastern plume boundary was sampled at two depths to delineate the extent of contamination in the deeper aquifer zone.
- In March and April 2017, soil and groundwater samples were collected to delineate the southern extent of the Site.
- In February 2018, direct push groundwater samples were collected and analyzed to delineate the northeastern extent of contamination relative to a prospective purchase of an adjacent property.

More information about each event can be found in the HWA reports referenced in Appendix A.

3.2 REDEVELOPMENT AND CLEANUP ACTIONS AT ADJACENT PROPERTIES AND SITES

In addition to the investigations and interim actions completed at the Site, many soil removal actions were completed as part of redevelopment of the City's downtown core. Activities that resulted in removal of contaminated soil include the following:

- **Targeted soil excavation on the source property**. In November 2015, a former home heating oil tank and its contents were excavated and removed from the source property (HWA 2016). Confirmation samples were collected to document that all potentially impacted soils were removed.

- **Utility Excavations.** TPH impacted soils were removed following discovery of a UST during a utility excavation adjacent to the Speedy Glass property (PSI 1998).
- **Roadway realignment in the downtown core.** This work removed some shallow soil contamination present in the roadway and ROW near the source property, including at location HWA-CH-B1.
- **Remediation of the Bothell Landing Site.** Targeted excavations were performed at the Bothell Landing Site to remove TPH sources and excavate TPH-contaminated soil (HWA 2014c). The Bothell Landing Site is shown on Figure 2.1; its footprint is within the boundary of cVOC contamination from the source property.

More information about soil removal actions can be found in the HWA reports referenced in Appendix A.

Groundwater remediation activities have also taken place at adjacent properties. For example, more than 3,000 pounds of Oxygen Release Compound targeting residual TPH in groundwater was applied in 2010 and between 2013 and 2014 within the Bothell Landing Site. The Bothell Landing Site TPH cleanup excavation footprint overlaps with the southern extent of the Site groundwater plume (HWA 2014c).

3.3 RECENT SITE CHARACTERIZATION: DATA GAPS INVESTIGATION WORK PLAN ACTIVITIES

In 2020, Floyd|Snider compiled and evaluated existing soil and groundwater data to identify data gaps and further delineate chlorinated solvent contamination in soil and groundwater at the Site associated with former dry-cleaning operations. Data gaps were summarized in the DGI Work Plan (Floyd|Snider 2020a). Floyd|Snider performed fieldwork described by the DGI Work Plan in the spring and summer of 2020 with completion of an investigation that included five mobilizations. The mobilizations and their objectives are as follows:

1. **Well Reconnaissance and Synoptic Water Level Event:** An inventory and status check of previously installed wells at the Site (summarized on Table 3.2) along with water level measurements to confirm groundwater flow direction.
2. **Groundwater Monitoring at Previously Installed Wells:** A groundwater monitoring well sampling event. Samples were collected at select wells to evaluate current conditions and concentrations of COPCs for the Site, following evaluation of historical data.
3. **Membrane Interface Probe Investigation:** A subsurface investigation that advanced a membrane interface probe (MIP) into the ground with a direct push drill rig. Real-time data of relative VOC concentrations were collected to locate contaminant mass and inform the placement of new permanent monitoring wells delineating the lateral and vertical plume extent.
4. **Soil and Groundwater Monitoring at Newly Installed Wells:** A monitoring well installation and soil sampling event. This event included installation of additional

groundwater monitoring wells and collection of soil samples to evaluate collocated soil and groundwater concentrations.

5. **Elevation Survey:** A groundwater sampling event and water level measurement event. Groundwater sampling was conducted at newly installed wells to evaluate COPC concentrations and delineate plume boundaries. Water level measurements were conducted at all previously and newly installed wells to confirm groundwater flow direction.

The results of each mobilization, and more information regarding sampling procedures and analytical methods, are summarized in the DGI Technical Memorandum (Floyd|Snider 2020b). The DGI Technical Memorandum along with laboratory analytical reports, well installation logs, MIP report, and other field documentation were submitted to Ecology in September 2020.

3.4 DATA QUALITY OBJECTIVES AND DATA USABILITY DETERMINATION

The quality of environmental data is an important consideration when characterizing the extent of contamination at a site and designing an appropriate cleanup. Data quality objectives for the Floyd|Snider field sampling activities described in Section 3.3 were defined in the DGI Work Plan (Floyd|Snider 2020a). All data collected during the data gaps field investigation were determined to be usable as qualified.

To ensure historical data were of appropriate quality for use in this RI/FS, Floyd|Snider performed extensive quality control (QC) and quality assurance (QA) checks on the historical dataset. These checks ensured data completeness and accuracy relative to the results reported in the original data source. As part of these efforts, Floyd|Snider renamed soil and groundwater sampling locations with duplicative naming conventions to ensure that each location had a unique and descriptive name to eliminate confusion when referencing the data. This was necessary because the existing soil and groundwater dataset compiles data from several different investigations, where soil borings and monitoring wells installed in different events by different consultants were given identical names—for example, MW-1 or B-1. Table 3.3 summarizes information about wells that were reassigned with new names to streamline identification and referencing. Similarly, Table 3.1 provides naming information for direct push, temporary well, and other nonpermanent soil and groundwater sample locations.

Limitations associated with the historical dataset, along with their implications for data usability for site characterization in this RI/FS, are summarized below.

- **Missing Information.** Soil and groundwater data included in this report may be missing sample date or sample depth information due to incomplete data in the source report and lack of associated field or laboratory documentation about the sample. For example, screen interval depths for historical monitoring or injection wells may be estimated or unknown.
- **Georeferenced Coordinate Information.** Some source reports did not list coordinates for sampled locations. In these cases, location coordinates were digitized from figures

showing the sample locations. In some cases, discrepancies in the mapped location were noted between different reports. Floyd|Snider performed field verification of all existing monitoring wells to increase confidence in the accuracy of groundwater well locations in this report but cannot verify locations for historical groundwater wells that are no longer present at the site, soil boring locations, or interim measure injection locations.

- **Age of Data.** The age of data should be considered when evaluating whether measured concentrations are representative of current soil and groundwater quality. For example, the entire dataset, including data that are more than 10 years old, can be reliably used to confirm that the Site has not been contaminated with particular chemicals. However, older data, particularly groundwater data analyzed for volatile chemicals, are less representative of current groundwater quality than more recent data. Because the entire historical dataset was already used to identify chemicals and analyte classes retained as candidates to become COPCs for the Site in the Data Gaps Work Plan, this RI will use groundwater data collected after January 1, 2009, to identify Site COPCs.
- **Analytical Sensitivity.** The age of the data is also considered with respect to improvements in analytical sensitivity and precision over time. These improvements have resulted in the laboratory being able to achieve lower reporting limits and to quantify the concentrations of various chemicals present in a sample with a greater degree of certainty. Effectively, improvements in analytical sensitivity cause more recent data to be of higher quality than older data, particularly for non-detect results. Older data tend to be less descriptive of actual site conditions than data collected by newer, more precise methods. When evaluating non-detect data, recent data analyzed using low-level analytical methods will be used in favor of older data, analyzed with less precise methods. In this dataset, USEPA Method 8260D is the most sensitive VOC analytical method, followed by USEPA Method 8260C, which was developed and approved for use in 2006. USEPA Method 8260B is the least sensitive VOC method from among the VOC analytical methods in the dataset.
- **Result Qualifiers.** Result qualifiers associated with historical sampling events are retained in the compiled dataset as received, without additional interpretation. That is, Floyd|Snider did not perform independent data validation on the historical dataset. Field documentation is also not available for many sampling events. Floyd|Snider is generally unable to determine when tentative detections or estimated concentrations (J-flagged results) are caused by sampling artifacts, interferences, or other forms of bias rather than being indicative of subsurface conditions. J-flagged historical data will be used as is in this RI/FS. Detected data with results equivalent to the reporting limit were subject to additional QA and QC review following submittal of the DGI Work Plan and prior to use in this RI/FS. It was determined that 59 results in soil and 124 results in groundwater samples were erroneously marked detected, rather than non-detect as reported by the lab. Detect flags for these data were changed to non-detect, and

their qualifiers were updated to "U." Affected samples and events are listed in Appendix B.

- **Direct Push Probe Groundwater Samples.** The collection of groundwater samples using a temporary well installed in a direct-push boring is a cost-effective way to collect samples to evaluate whether particular analyte classes and chemicals are present at levels of concern at a site. If the samples collected from a temporary well are measured at concentrations less than the screening levels, these data can be used to screen out these chemicals from further consideration as COPCs for the Site. If chemicals are detected at elevated concentrations, temporary well data can be used to determine appropriate placement of permanent groundwater monitoring wells.

  However, groundwater data collected from a temporary well are subject to false positives due to higher turbidity and should be used with caution when evaluating the nature and extent of contamination for metals and other chemicals with high soil organic carbon partitioning coefficient (K_{oc}) values. High turbidity measurements in groundwater samples are known to cause high bias in metals results due to the entrainment of soil particles in the sample (Puls and Powell 1992). Highly turbid samples are typically not used to determine COCs or to measure compliance due to their propensity to cause false positives in the results.

3.5 SUMMARY OF SITE DATA AND CHEMICALS OF INTEREST

The historical data described in Section 3.1 were evaluated in the DGI Work Plan to identify chemicals that could become COPCs for the Site. This evaluation determined that the following chemicals and analyte classes may become COPCs in either soil or groundwater:

- Arsenic
- cVOCs
- TPH
- Volatile organic compounds (VOCs), including volatile components of TPH (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX])

Semivolatile organic compounds, including polycyclic aromatic hydrocarbons and polychlorinated biphenyls, did not exceed the screening levels developed in the DGI Work Plan. These chemicals were eliminated from further consideration as COPCs. Their results are not described in the body of this report; however, their data are included in Appendix B.

Conventionals and dissolved gas data collected to support IM performance evaluation do not require screening levels and are not candidates to become COPCs. Data for these analytes are used as appropriate to support determination of the nature and extent of contamination of the Site in the RI portion of this report and to design and appropriate cleanup in the FS portion of this report.

4.0 Conceptual Site Model

The CSM tells the story of when and where the Site was contaminated, what media were affected, where the contamination migrated (pathways), and who and what is, or can potentially be, harmed from the contamination (receptors). Development of the CSM is based on currently available information and is an evolving process that is subject to refinement as more is learned about the Site. Several data gaps in the vertical and lateral extent of the groundwater contamination plume presented in the Draft RI/FS (HWA 2018a) were identified during development of the DGI Work Plan. These data gaps were filled by the data gaps field investigation completed to support development of this RI/FS (Floyd|Snider 2020b).

This CSM includes the understanding of the distribution of contamination, probable location of the contaminant mass, and migration pathways to receptors based on data from the previous investigations described in Section 3. The CSM along the cross-section B-B' (location shown on Figure 4.1) is illustrated on Figure 4.2.

4.1 MEDIA OF CONCERN, EXPOSURE PATHWAYS, AND RECEPTORS

The CSM identifies the media of concern that may be impacted by current and former activities at the source property. Previous site assessments, including Ecology's Site Hazard Assessment (Ecology 2007), identified vadose zone (unsaturated) soil, saturated soil, and groundwater as media of concern. Because contamination has only been found in the subsurface, and the source property is paved, surface water is excluded from the media of concern and not considered an exposure pathway.

For impacted soil found in previous investigations, a potential exposure pathway consists of direct contact with shallow impacted soil in unpaved areas by future workers or within future excavations related to redevelopment activities.

Chemicals associated with historical dry-cleaning operations at the source property are volatile in nature. These chemicals present a potential risk to indoor air quality if present in high concentrations and if structures are located or built over contaminated areas. A potential exposure pathway consists of inhalation of vapors within potential future buildings that may be constructed over these areas. Workers in a building with a potential vapor intrusion pathway are potential receptors. Vapor risks to indoor air under current or future foreseeable use will be evaluated using Ecology's Guidance for Evaluating Soil Vapor Intrusion in Washington State (Ecology 2018a).

Terrestrial ecological receptors are not expected to be affected because of the limited habitat on the Site and adjacent parcels. However, plants and burrowing or ground-dwelling invertebrates are exposed directly to soil. Based on the Site configuration of paved surfaces and discontinued dry-cleaning operations, there is no potential for erosion and transport of contaminants from soil by stormwater.

There are no known drinking water wells in the immediate vicinity of the Site, and the use of Site groundwater as a drinking water source is unlikely given the Downtown Core zoning classification of the Site. The potential but incomplete exposure pathway exists for drinking water at the Site.

4.1.1 Potential Sources of Contamination and Contaminant Transport Pathways

Environmental site assessment reports by EHS International from 2001 indicated that the existing contamination resulted from historical releases associated with former dry-cleaning operations, which occurred at the source property between the 1950s and 2012. The source property continued to house dry-cleaning businesses until as recent as 2012, after which buildings were demolished for redevelopment activities associated with the construction of the Bothell City Hall municipal campus. Previous environmental reports have not been able to confirm the method of release of hazardous substances but have determined that the releases were not recent and were likely caused by leaks in equipment or discharges (accidental or intentional) to storm drains, catch basins, side sewers, or the ground surface. There are no continuing sources of hazardous substances stored or used at the source property.

The entirety of the source property is paved; however, the parcels immediately surrounding it are unpaved. Infiltration from precipitation is reduced by the pavement but not eliminated. Therefore, infiltration flow through contaminated soil under the subsurface causing leaching into groundwater remains a potential source of contamination.

The Speedy Glass property, one of several contaminated sites downgradient of the source property, was found to contain a leaking UST during a utility excavation in 1998 (PSI 1998). Obvious visual and olfactory signs of petroleum contamination in surrounding soil and groundwater were observed during this excavation but the UST was left in place. The current condition and contents of this UST remain unknown.

Based on the current understanding of the Site, current land use, and previous environmental studies, there are three primary transport mechanisms:

- Volatilization of hazardous substances in the vadose zone and water table
- Sinking of dry-cleaning solvents that are denser than groundwater
- Flow of water downgradient, generally south, of the source property within groundwater

4.1.2 Potential Receptors and Exposure Pathways

The sections that follow identify the receptors, potentially applicable exposure pathways, and corresponding regulatory criteria and natural background concentrations considered in the development of the SLs for each of the potentially impacted media.

4.1.2.1 Groundwater

Previous site assessments, including Ecology's Hazard Ranking Index, have found that the discharge to surface water pathway is not active at the Site. Therefore, CULs developed for the Site must:

- Protect human health from contaminated drinking water[1]
- Protect indoor air quality via the vapor intrusion pathway

4.1.2.2 Soil

Soil SLs are proposed at the lowest level that will accomplish the following:

- Protect groundwater at levels protective of drinking water use via the soil-to-groundwater (leaching) pathway
- Protect residents from direct contact with soil in the upper 15 feet bgs
- Protect indoor air quality via the vapor intrusion pathway
- Protect wildlife ecological receptors

[1] Groundwater at the Site is not a current or future drinking water resource, nor are there any nearby downgradient wells that may be affected by the Site. Groundwater is considered potable in accordance with WAC 173-340-720, because Ecology has not issued a non-potability determination.

5.0 Determination of Cleanup Standards and Chemicals of Concern

Section 5.1 describes the development of SLs and preliminary CULs for soil and groundwater. COPCs in soil and groundwater are identified in Section 5.2 by screening site data against their SLs described in Section 5.1. Preliminary CULs in soil and groundwater were developed for each chemical identified as a COPC in that medium.

MTCA Method A was selected as the appropriate regulatory framework for this Site, which is impacted by relatively few hazardous substances. As such, SLs and preliminary CULs were developed consistent with WAC 173-340-720(3) for groundwater and WAC 173-340-740(2) for soil.

5.1 SITE SCREENING LEVELS AND CHEMICALS OF POTENTIAL CONCERN

SLs represent the lowest criteria that could become CULs for a site. SLs are protective of the most sensitive potential receptor that could be exposed given current or potential future land use considerations. SLs do not consider site-specific factors that can limit contaminant transport. As such, they are conservative values that can be used to determine whether contamination is present at levels that may be of concern to human health or the environment.

SLs were initially developed in the DGI Work Plan for the purpose of contaminant selection for investigation samples and for identification of appropriate laboratory detection limits to ensure that data are of sufficient quality to be usable in this RI/FS. If a chemical was detected at concentrations exceeding the SLs developed in the DGI Work Plan, it was retained as a candidate to become a COPC. This evaluation is contained in the DGI Work Plan.

This evaluation found that cVOCs are primary COPCs in both soil and groundwater. Additional chemicals were identified as secondary COPCs, based on limited detections at elevated concentrations in site data, including arsenic in groundwater, and VOCs and TPH in soil and groundwater, respectively.

In this RI/FS, SLs for all chemicals and analyte classes identified in the DGI Work Plan as candidates to become COPCs were reviewed and updated as necessary, consistent with MTCA cleanup regulations and updated toxicity information and guidance released after the development of the DGI Work Plan. Throughout the remainder of this RI/FS, the term SLs describes the updated SLs. Updated SLs are described in Section 5.1.1 for groundwater, and Section 5.1.2 for soil.

5.1.1 Groundwater Screening Levels

Groundwater SLs are presented in Table 5.1. The following criteria were considered when developing groundwater SLs, consistent with WAC 173-340-720(3):

- Washington MTCA Method A groundwater criteria (WAC 173-340-900 Table 720-1)
- State and federal maximum contaminant levels (MCLs) established in 40 Code of Federal Regulations (CFR) 141 Subpart B and WAC 326-290-310

- Federal maximum contaminant level goals (MCLGs) established in 40 CFR 141 Subpart F
- MTCA Method B vapor intrusion SLs[2] established in Ecology guidance (Ecology 2018a) and recent Ecology implementation memoranda:
  - Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action,* Table B-1: Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels (Ecology 2018a)
  - Ecology's Implementation Memorandum No. 14: *Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion* (Ecology 2016)
  - Ecology's Implementation Memorandum No. 18: *Petroleum Vapor Intrusion (PVI): Updated Screening Levels, Cleanup Levels, and Assessing PVI Threats to Future Buildings* (Ecology 2018b)
  - Ecology's Implementation Memorandum No. 22: *Vapor Intrusion (VI) Investigations and Short-Term Trichloroethene (TCE) Toxicity* (Ecology 2019)

For each chemical, the lowest criterion from among the criteria described was selected as the groundwater SL. Importantly, WAC 173-340-720(3) requires consideration of federal MCLGs for noncarcinogens (i.e., chemicals with a non-cancer human health effect). When the MCLG is equivalent to zero, it was not selected as the SL. The MCLG is equivalent to zero for carcinogenic chemicals.

Finally, the groundwater SL is equivalent to the lowest (most stringent) MTCA Method B groundwater criterion for that chemical when:

- MTCA Method A criteria are not available for any chemical previously identified as a primary COPC for the Site (i.e., *cis*- and *trans*-1,2-DCE); or
- No other applicable or relevant and appropriate requirements are available under state or federal laws.

The MTCA Method B groundwater criteria listed in Table 5.1 are the most stringent from among cancer and non-cancer MTCA Method B criteria listed in Ecology's February 2021 CLARC data tables. MTCA Method B criteria are calculated using WAC 173-340-720 Eqn. 720-1 for carcinogenic effects, and WAC 173-340-720 Eqn. 720-2 for non-cancer health effects. MTCA default input values were used in these calculations.

5.1.2 Groundwater Chemicals of Potential Concern

To identify COPCs, site data described in Section 3.0 were compared to the SLs described in Section 5.1.1. The groundwater dataset used to identify COPCs includes all groundwater data collected within the study area defined in the DGI Work Plan that was collected after January 1, 2009. Groundwater data that are more than 10 years old were omitted from the dataset because

2 There are no MTCA Method A groundwater criteria for the vapor intrusion pathway.

the chemicals retained as candidates to become COPCs are volatile; as such, their concentrations are expected to degrade over time due to both natural attenuation and IMs that have been performed at the site. The groundwater locations included in the dataset used to identify COPCs are shown on Figure 5.1.

Information used in the screening evaluation to identify COPCs are summarized in Table 5.2 for chemicals detected in groundwater, and in Table 5.3 for chemicals not detected in groundwater. These tables contain frequency of exceedance (FOE) information about detect and non-detect results. Both tables provide information about the number of results in the dataset; the SL for each chemical; the range of reporting limits in historical and recent (2020) data; the percent of results that exceed the SL; each chemical's COPC status; and the rationale describing whether a chemical became a COPC. Additionally, Table 5.2 provides information about the maximum detected result and its exceedance factor.

Chemicals that were detected in groundwater are retained as COPCs if any of the following criteria are met:

1. The chemical was detected at concentrations greater than 2 times the SL, per WAC 173-340-720(9)(e)(i)
2. Fewer than 10% of results exceed the SL, per WAC 173-340-720(9)(e)(ii)
3. The chemical is a breakdown product of one of the chemicals retained as a COPC using criteria (a) or (b) in the list above

As shown in Table 5.2, nine chemicals (including arsenic; five cVOCs; and three VOCs, including benzene, a volatile component of TPH) were retained as COPCs.

Diesel-range organics (DRO) and oil-range organics (ORO) were both eliminated based on their low frequency and magnitude of exceedances among detected results. Two additional VOCs with elevated reporting limits in a few samples were also eliminated as COPCs. Sixteen additional chemicals were eliminated because they did not exceed their SLs in any sample.

Most chemicals that were not detected in groundwater have reporting limits that are less than their SL and were subsequently eliminated as COPCs (Table 5.3). Nine VOCs have historical reporting limits that are elevated relative to the SL.

The following criteria were used to eliminate six of the nine non-detect chemicals with elevated reporting limits as COPCs:

- Elevated reporting limits are only present in the historical dataset; that is, the maximum non-detect result measured in recent (2020) data for the chemical is less than the SL; or
- The frequency and magnitude of results with elevated reporting limits would allow the chemical to be eliminated as a COPC using the criteria described for detected chemicals.

Five VOCs that were not detected in groundwater cannot be eliminated using these criteria: 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, carbon tetrachloride, and hexachlorobenzene. Each of these chemicals can be eliminated from further consideration as a COPC because none of these chemicals are suspected of being present at the Site based on Site history and other knowledge, per WAC 173-340-720(9)(f)(v).

None of these VOCs is associated with dry-cleaning operations. Other businesses formerly present at the source property are unlikely to have used these chemicals. There is no documented storage or use of these VOCs at any of these properties, nor would these VOCs be expected to be present at any of the properties based on the nature of commercial operations that took place.[3]

Following the screening evaluation performed in Table 5.3, a total of 32 VOCs that were not detected in groundwater collected after January 1, 2009, were eliminated as groundwater COPCs.

5.1.3 Soil Screening Levels

Soil SLs are presented in Table 5.4. The following criteria were considered when developing soil SLs, consistent with WAC 173-340-740(2):

- MTCA Method A soil criteria for unrestricted land use (WAC 173-340-900 Table 740-1)
- Simplified Terrestrial Ecological Evaluation (TEE) soil SLs (WAC 173-340-900 Table 749-2)

Additionally, when MTCA Method A criteria were not available, MTCA Method B soil criteria were considered. The MTCA Method B soil criteria listed in Table 5.4 are the most stringent from among cancer and non-cancer MTCA Method B criteria listed in Ecology's February 2021 CLARC data tables. MTCA Method B criteria may be calculated with WAC 173-340-720 Eqn. 740-1 and 740-2 and MTCA default input values.

The lowest value from among these criteria was selected as the SL.

5.1.4 Soil Chemicals of Potential Concern

To identify COPCs, site data described in Section 3.0 were compared to the SLs described in Section 5.1.3. The soil dataset used to identify COPCs includes all soil data collected within the study area defined in the DGI Work Plan. The soil sample locations included in the dataset used to identify COPCs is shown on Figure 5.2.

Information used in the screening evaluation to identify COPCs are summarized in Table 5.5 for chemicals detected in soil, and in Table 5.6 for chemicals not detected in soil. These tables contain

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[3] 1,2-Dibromoethane was historically present as a component in leaded gasoline. While gasoline was retained as a secondary COPC based on the site data evaluation performed in the DGI Work Plan, lead was not detected in either soil or groundwater. Thus, there is no reason to suspect the presence of 1,2-dibromoethane at the site.

FOE information about detect and non-detect results. Both tables provide information about the number of results in the dataset; the SL for each chemical; the range of reporting limits in historical and recent (2020) data; the percent of results that exceed the SL; each chemical's COPC status; and the rationale describing whether or not a chemical became a COPC. Additionally, Table 5.5 provides information about the maximum detected result and its exceedance factor.

Chemicals that were detected in soil are retained as COPCs if any of the following criteria are met:

1. The chemical was detected at concentrations greater than 2 times the SL, per WAC 173-340-720(9)(e)(i); or
2. Fewer than 10% of results exceed the SL, per WAC 173-340-720(9)(e)(ii); or
3. The chemical is a breakdown product of one of the chemicals retained as a COPC using criteria (a) or (b) in the list above.

As shown in Tables 5.5 and 5.6, 10 chemicals (including five cVOCs; DRO + ORO; gasoline-range organics (GRO); and chloroform, benzene, and ethylbenzene) were retained as COPCs.

Most chemicals that were not detected in soil have reporting limits that are less than their SLs and were subsequently eliminated as COPCs (Table 5.6). Six VOCs have historical reporting limits that are elevated relative to the SL.

Four of the six non-detect chemicals with elevated reporting limits were eliminated as COPCs. Chemicals were eliminated as COPCs if either of the following two criteria were met:

- Elevated reporting limits are only present in the historical dataset; that is, the maximum non-detect result measured in recent (2020) data for the chemical is less than the SL; or
- The frequency and magnitude of results with elevated reporting limits would allow the chemical to be eliminated as a COPC using the criteria described for detected chemicals.

Two VOCs that were not detected in soil cannot be eliminated using these criteria: 1,2,3-trichloropropane, and hexachlorobenzene. Both of these chemicals can be eliminated from further consideration as a COPC because neither is suspected of being present at the Site based on site history and other knowledge, per WAC 173-340-740(7)(f)(v).

Neither of these VOCs is associated with dry-cleaning operations. Other businesses formerly present at the source property are unlikely to have used these chemicals. There is no documented storage or use of these VOCs at the source property, nor would these VOCs be expected to be present based on the nature of commercial operations that took place.

5.2 GROUNDWATER CHEMICALS OF CONCERN AND CLEANUP STANDARDS

This section establishes groundwater cleanup standards for COCs in groundwater. Groundwater cleanup standards are composed of a proposed CUL combined with a point of compliance, which is the location where the proposed CUL must be met. Groundwater cleanup standards will ensure that groundwater is protective of human health, ecological receptors, and the environment. The highest beneficial use of groundwater in this evaluation is assumed to be drinking water use (refer to Section 4.1.2.1). However, groundwater cleanup standards will be protective of all active or potentially active exposure pathways at the site, considering both current and future land use.

Development of groundwater cleanup standards occurs in a stepwise process that begins in Section 5.2.1, with the development of groundwater preliminary CULs for all chemicals retained as COPCs in Section 5.1.2. Next, in Section 5.2.2, data representative of current groundwater quality at the site are used to identify COCs in groundwater. Finally, Section 5.2.3 describes the proposed CUL and point of compliance in groundwater for each groundwater COC. Together, the proposed CUL and its associated POC form the groundwater cleanup standards for the site. Groundwater cleanup standards are summarized for each COC in Section 5.2.4.

5.2.1 Preliminary Groundwater Cleanup Levels

The starting point for development of preliminary groundwater CULs is the SL applicable to that pathway. SLs are intentionally conservative and designed to be protective of any site. By contrast, preliminary CULs may consider site-specific conditions that limit current and future exposure to contamination in accordance with WAC 173-340-708(10)(b)(i). At this Site, exposure assumptions considered in development of the groundwater preliminary CUL for the vapor intrusion pathway were modified from their SLs as part of the preliminary groundwater CUL development process.

Each step of the groundwater preliminary CUL process is summarized in the text that follows. Criteria considered in the development of the groundwater preliminary CULs are listed in Table 5.7.

1. First, the minimum criterion from among the groundwater preliminary CULs listed in WAC 173-340-720(3) is determined and listed in Table 5.6. This value is referred to as the MTCA Method A CUL, and is the lowest from among the following criteria:
    - Washington MTCA Method A groundwater criteria (WAC 173-340-900 Table 720-1)
    - State and federal MCLs established in 40 CFR 141 and WAC 326-290-310
    - Federal MCLG for noncarcinogens established in 40 CFR 141
2. Next, the minimum MTCA Method B vapor intrusion SL (Ecology 2018a) was calculated for each COPC, using exposure factors appropriate for current and future land use at the Site. This value is referred to as the MTCA Method B VI SL, and is the lowest from among the following criteria:
    - MTCA Method B VI SLs protective of cancer effects, calculated using WAC 173-340-750 Eq. 750-1 and the MTCA-default commercial input values listed in Appendix C; and

- MTCA Method B VI SLs protective of non-cancer effects, calculated using WAC 173-340-750 Eq. 750-2 and the MTCA-default commercial input values listed in Appendix C.

  The buildings present within the study area are not used for residential purposes; rather, they are used for commercial purposes where the most highly exposed receptors are workers. The default MTCA Method B exposure assumptions were developed to be protective of a child living in a residence proximate to shallow groundwater contamination. These default assumptions are overly conservative relative to current and future land use at the properties within the study area. For example, the SL was calculated using an average body weight input value of 16 kilograms (kg; representing a child). The receptors of concern at this site are workers with an average body weight closer to 70 kg. Therefore, inputs to these equations were modified in accordance with WAC 173-340-708(10)(b)(i) to determine site-specific indoor air criteria that better reflect exposure levels to workers at the site.

3. Third, MTCA Method B groundwater criteria were considered when no MTCA Method A CUL or MTCA Method B VI SL is available for a particular COPC. This step does not apply; relevant criteria developed in Steps 1 or 2 are available for all COPCs.
4. In Step 4, an appropriate PQL for each chemical is defined. For this Site, the PQL is defined as the median reporting limit for non-detect results analyzed in 2020. This value is equivalent to the laboratory's stated PQL for all chemicals retained as groundwater COPCs except hexachlorobutadiene.[4]
5. Finally, the PQL is compared to the lowest criterion from among the risk-based criteria listed earlier. The preliminary CUL is then determined as follows:
   - If the risk-based target CUL is less than the PQL, the PQL is selected as the preliminary CUL per WAC 173-340-720(7)(c).
   - If the risk-based target CUL is greater than the PQL, it is selected as the preliminary CUL.

5.2.2 Proposed Groundwater Cleanup Levels and Point of Compliance

Proposed CULs were developed for each chemical identified as a groundwater COC. Proposed groundwater CULs are numerically equivalent to the preliminary CUL developed in Table 5.7 for all groundwater COCs.

The POC is defined as the location where a CUL applies. The standard POC for groundwater criteria protective of drinking water exposure is defined in MTCA as "throughout the site from the uppermost level of the saturated zone to the lowest depth potentially affected by the site" per WAC 173-340-720(8)(b). Ecology may approve a conditional POC if it can be demonstrated that it is not practical to meet groundwater CULs at the standard POC within a reasonable

4 Laboratory PQLs in soil and groundwater are provided in the DGI Work Plan (Floyd|Snider 2020).

restoration time frame using all practicable methods of treatment in the site cleanup per WAC 173-340-720(8)(c) or (d).

In this RI, the standard POC for drinking water criteria will be used to define the nature and extent of contamination. The FS will evaluate whether it is feasible to meet the standard POC for groundwater, or whether a conditional POC is required.

Additionally, though the vapor intrusion pathway did not become the basis of the proposed CUL for any COC, the FS will evaluate groundwater quality relative to vapor intrusion SLs listed in Table 5.1, using the vapor intrusion POC defined in Ecology's vapor intrusion guidance (Ecology 2018a). This evaluation will be performed to determine whether institutional controls (ICs) or other development restrictions are required, or if subsurface groundwater will eventually reach the vapor intrusion SLs in a suitable time frame such that restrictions to protect potential future residential land use are not necessary.

5.2.3 Groundwater Chemicals of Concern

This section identifies COCs in groundwater from among the groundwater COPCs by screening site groundwater data against their preliminary CULs. To the extent possible, the groundwater dataset used to identify COCs should be representative of current groundwater quality following completion of interim actions at the Site, consistent with WAC 173-340-720(9)(a). This MTCA provision establishes that "[c]ompliance with groundwater cleanup levels shall be determined by analysis of groundwater samples representative of the groundwater." The groundwater dataset used to identify groundwater COCs is defined as follows:

- **Arsenic.** The groundwater dataset includes all results from permanent monitoring wells collected on or after March 30, 2016.[5] The selection of this date ensures that interim actions that could alter geochemical conditions within the aquifer (e.g., ChemOx bioinjections, or presence of TPH in soil within the footprint of the Bothell Landing Site that has since been remediated) are excluded from the dataset. Additionally, water results collected from direct-push probes, which can be artificially elevated due to high sample turbidity typical of this type of sample, are excluded.
- **All Other Chemicals.** The groundwater dataset for cVOCs, VOCs, and benzene includes all results from permanent monitoring wells collected on or after March 30, 2016. Within the boundary of the plume delineated in the DGI Work Plan Technical Memorandum (Floyd|Snider 2020b), data collected from direct push probes on or after March 30, 2016, are also included in the dataset. Outside the boundary of the plume, the dataset includes all data collected from direct push probes within the study area on or after January 1, 2009. Application of two different date ranges to two different portions of the study area ensures sufficient sample density to perform Site-wide data screening to determine COC status for all chemicals and ensures sufficient data are available to bound the extent of the plume using historical probe data in areas where permanent monitoring wells were not installed.

[5] Data collected after March 30, 2016, were collected following the second bioinjection IM.

Information used in the screening evaluation to identify COCs is summarized in Table 5.8 for groundwater COCs. This table contains FOE information about detect and non-detect results, along with information about the number of results in the dataset; the preliminary CUL for each chemical; the range of reporting limits in historical and recent (2020) data; the percent of results that exceed the preliminary CUL and, if applicable, the maximum exceedance factor; each chemical's COC status; and the rationale describing whether a chemical became a COC. Exceedance information in this table is based on individual results: field samples and field duplicate samples are considered individual samples.

Chemicals are eliminated as groundwater COCs using the criteria listed in WAC 173-340-720(9)(e)(i-ii). Specifically, chemicals are not retained as COCs if the following criteria are met:

1. The chemical was not detected at concentrations greater than 2 times the preliminary CUL; and
2. Fewer than 10% of detected results exceed the preliminary CUL.

Based on information presented in Table 5.8, four chemicals (i.e., *trans*-1,2-DCE, chloroform, hexachlorobutadiene, and benzene) were screened out as groundwater COCs. These were the only chemicals screened out using this rationale.

Arsenic and four cVOCs (i.e., PCE, trichloroethene, *cis*-1,2-DCE, and vinyl chloride) were retained as groundwater COCs.

5.2.4 Summary of Groundwater Chemicals of Concern and Proposed Cleanup Standards

Proposed CULs for each groundwater COC are summarized in Table 5.9. These CULs assume that future land use will remain commercial for protection of the vapor intrusion pathway.

The standard POC where these CULs apply is groundwater throughout the Site, to the maximum depth where contamination from the Site is present. The standard POC applies to all groundwater COCs. Compliance is determined for each groundwater monitoring well individually in accordance with WAC 173-340-720(9)(c).

Table 5.9
Summary of Groundwater Chemicals of Concern and Proposed Cleanup Levels (µg/L)

Analyte	CAS No.	Proposed CUL	CUL Basis	Toxicity Basis (1)
Total Metals				
Arsenic	7440-38-2	5.0	Background; MTCA Method A	Carcinogenic (2)
Chlorinated Volatile Organic Compounds				
PCE	127-18-4	5.0	MTCA Method A	Carcinogenic
TCE	79-01-6	5.0	MTCA Method A	Carcinogenic
cis-1,2-DCE	156-60-5	70	Federal MCL	Short-Term/Acute
Vinyl chloride	75-01-4	0.20	MTCA Method A	Carcinogenic

Notes:
1 In accordance with WAC 173-340-720(9)(c)(v), compliance with proposed CULs will be determined using an upper percentile concentration for CULs based on short-term or acute toxic effects on human health or the environment, and the true mean concentration for CULs based on chronic or carcinogenic effects.
2 The basis of the arsenic CUL is Washington state background, as established in WAC Table 720-1. The lowest human-health risk-based criterion is protective of the cancer endpoint.

Abbreviations:
CAS Chemical Abstracts Service
µg/L Micrograms per liter

Key information about each of the groundwater COCs is provided in Table 5.10. Information contained in Table 5.10 includes current and historical commercial uses potentially relevant to on-site releases and environmental partitioning, fate, and transport information. This information can be used to supplement the discussion of nature and extent of contamination contained in Section 6.1.

5.3 SOIL CHEMICALS OF CONCERN AND CLEANUP STANDARDS

This section establishes soil cleanup standards for COCs in soil. Soil cleanup standards are composed of a proposed CUL combined with a point of compliance, which is the location where the proposed CUL must be met. Soil cleanup standards will ensure that soil is protective of human health, ecological receptors, and the environment. Soil cleanup standards will be protective of all active or potentially active exposure pathways at the Site, considering both current and future land use.

Development of soil cleanup standards occurs in a stepwise process that begins in Section 5.3.1, with the development of soil preliminary CULs for all chemicals retained as a COPCs in Section 5.1.3. Next, data representative of site soil are used to identify COCs in soil in Section 5.3.3. Finally, Section 5.3.4 describes the proposed CUL and point of compliance in groundwater for each soil COC. Soil cleanup standards are summarized for each COC in Section 5.3.5.

5.3.1 Preliminary Soil Cleanup Levels

Preliminary CULs were developed for each chemical identified as a soil COPC in Section 5.1.4. Preliminary CULs are summarized in Table 5.11. Development of preliminary CULs is a stepwise process that begins with consideration of the same criteria that were used in SL development in Table 5.4.

The Site qualifies for a terrestrial ecological exclusion under WAC 173-340-7491(1)(b). With the exception of landscaping strips and medians filled with imported, uncontaminated fill dirt, the Site is paved or covered in buildings. Together, these buildings and pavement provide a wildlife barrier that prevent plants and animals from being exposed to contaminated soil. Therefore, TEE criteria contained in WAC 173-340-900 Table 749-2 are excluded from consideration in the development of preliminary CULs for the Site. However, SLs protective of ecological receptors may be considered to determine whether future land use restrictions (i.e., ICs) are required to maintain this condition and provide for protection of potential future ecological exposure.

Soil preliminary CULs are determined as follows, consistent with WAC 173-340-745(2):

1. First, the MTCA Method A CUL is determined. This criterion is equivalent to the MTCA Method A soil criteria for unrestricted land use (WAC 173-340-900 Table 740-1). The pathway basis of the MTCA Method A CULs for each COPC is included in Table 5.11.
2. Next, MTCA Method B soil criteria protective of human health via direct contact exposure were considered if either:
    - a chemical does not have a MTCA Method A CUL.
    - MTCA Method A criteria were developed for protection of groundwater, and the chemical was not retained as a groundwater COC per WAC 173-340-747(3)(f). For these chemicals, groundwater data empirically demonstrate that measured soil concentrations will not cause an exceedance of groundwater CULs, consistent with WAC 173-340-747(9)(b).[6]

    The MTCA Method B criterion presented in Table 5.11 is the lowest from among the following criteria:

    - MTCA Method B criteria protective of cancer effects, calculated using WAC 173-340-740 Eq. 740-1 and the MTCA-default input values listed in Appendix C.
    - MTCA Method B criteria protective of non-cancer effects, calculated using WAC 173-340-740 Eq. 740-2 and the MTCA-default input values listed in Appendix C.

[6] As described in Section 3.2, TPH contamination from leaking USTs was first discovered on the Speedy Glass property in the early 1990s. An adequate amount of time has elapsed from the date of the initial release such that if the leaching pathway were active, TPH and BTEX contamination would be observed in groundwater during the 2020 DGI sampling events. Groundwater data are therefore sufficient to empirically demonstrate that current soil concentrations do not cause groundwater to be impacted at levels of concern, per WAC 173-340-747(9)(b)(ii). However, no TPH MTCA Method B criteria are available for the direct contact pathway; the MTCA Method A criterion for GRO is carried forward as a surrogate soil CUL for this pathway.

3. Third, Ecology soil vapor intrusion thresholds presented in Attachment B of Ecology's VI Implementation Memorandum No. 14 were considered.
4. In the fourth step, an appropriate PQL for each chemical is defined. For the Site, the PQL is defined as the median reporting limit for non-detect results analyzed in 2020. This value is equivalent to the laboratory's stated PQL for most chemicals retained as COPCs. The median PQL achieved in soil samples for DRO+ORO and GRO is slightly greater than the laboratory's stated PQL.[7]
5. Finally, the PQL is compared to the lowest criterion from among the risk-based criteria listed in steps 1 and 2. The preliminary CUL is then determined as follows:
   - If the risk-based target CUL is less than the PQL, the PQL is selected as the preliminary CUL per WAC 173-340-740(5)(c).
   - If the risk-based target CUL is greater than the PQL, it is selected as the preliminary CUL.

5.3.2 Soil Point of Compliance

The POC where the preliminary CUL applies is listed in Table 5.11 and was determined consistent with WAC 173-340-740(6). Under MTCA, the soil POC varies based on the pathway being considered. The applicable POC for each pathway considered at the site is listed as follows:

- Protection of groundwater: All site soil, to the maximum depth where contamination occurs. This POC is consistent with WAC-173-340-740(6)(b).
- Protection of human health via direct contact: Soil from the ground surface to a maximum depth of 15 feet bgs or the maximum depth where contamination occurs, whichever is lesser. This POC is consistent with WAC-173-340-740(6)(d).
- Protection of human health via vapor intrusion: Soil from the ground surface to the uppermost groundwater saturated zone, or the maximum depth where contamination occurs, whichever is lesser. This POC is consistent with WAC-173-340-740(6)(c). At this site, groundwater typically occurs at a depth of 5 to 8 feet bgs.

5.3.3 Soil Chemicals of Concern

This section identifies COCs in soil from among the soil COPCs by screening site soil data against their preliminary CULs. To the extent possible, the soil dataset used to identify COCs should be representative of subsurface conditions where exposure to contamination may occur, consistent with WAC 173-340-740(7)(b).

Soil data collected prior to January 1, 2009, were omitted from the dataset used to identify soil COCs because the chemicals retained as candidates to become COPCs are volatile; as such, their

[7] Laboratory PQLs in soil and groundwater are provided in the DGI Work Plan (Floyd|Snider 2020a).

concentrations are expected to degrade over time as a result of both natural attenuation and interim actions that have been performed at the site.

Information used in the screening evaluation to identify COCs is summarized in Table 5.12 for soil COCs. This table contains FOE information about detect and non-detect results, along with information about the number of results in the dataset; the preliminary CUL for each chemical; the range of reporting limits in historical and recent (2020) data; the percent of results that exceed the preliminary CUL and, if applicable, the maximum exceedance factor; each chemical's COC status; and the rationale describing whether or not a chemical became a COC. Exceedance information in this table is based on individual results: field samples and field duplicate samples are considered individual samples.

Chemicals are eliminated as soil COCs using the criteria listed in WAC 173-340-740(7)(e)(i-ii). Specifically, chemicals are not retained as COCs if the following criteria are met:

1. The chemical was not detected at concentrations greater than 2 times the preliminary CUL; and
2. Fewer than 10% of detected results exceed the preliminary CUL.

Based on information presented in Table 5.12, eight chemicals (i.e., four cVOCs; methylene chloride; DRO+ORO; benzene; and ethylbenzene) were screened out as soil COCs.

PCE and gasoline range organics were retained as soil COCs.

5.3.4 Proposed Soil Cleanup Levels and Point of Compliance

Proposed CULs were developed for each chemical that was retained as a soil COC in Table 5.12. Proposed CULs are numerically equivalent to the preliminary CULs developed in Table 5.11.

The standard POC where these CULs apply is soil throughout the Site, up to the maximum depth where contamination from the Site is present. In this RI, the standard POC for soil will be used to define the nature and extent of contamination.

The FS will evaluate whether it is feasible to meet the standard POC for soil, or whether ICs are required.

5.3.5 Summary of Soil Chemicals of Concern and Proposed Cleanup Standards

Proposed CULs for each soil COC are summarized in Table 5.13. These CULs are protective of unrestricted current and future land use for a site where the ecological exposure pathway is not active.

The standard POC where these CULs apply is soil throughout the Site, to the maximum depth where contamination from the Site is present. The standard POC applies to both soil COCs.

Table 5.13
Summary of Soil Chemicals of Concern and Proposed Cleanup Levels (mg/kg)

Analyte	CAS No.	Proposed CUL	CUL Basis
Chlorinated Volatile Organic Compounds			
PCE	127-18-4	0.050	Protection of Groundwater
Total Petroleum Hydrocarbons			
Gasoline Range Organics	GRO	30	Protection of Groundwater

Abbreviations:
CAS Chemical Abstracts Service
mg/kg Milligrams per kilogram

6.0 Nature and Extent of Contamination

The sections that follow describe the nature and extent of groundwater and soil contamination for the Site COCs identified in Section 5.0. Five chemicals (arsenic and four cVOCs) are groundwater COCs. Two chemicals (PCE and GRO) are soil COCs. Section 6.1 describes groundwater contamination present at the Site. Section 6.2 describes soil contamination.

6.1 GROUNDWATER

This section delineates the nature and extent of groundwater contamination using data presented in Table 6.1 and figures referenced throughout this section. Table 6.1 includes data for all groundwater COCs. For completeness, Table 6.1 also includes data for groundwater COPCs that did not become COCs. Data for groundwater COPCs may be discussed in text but are not used to bound the nature and extent of contamination for purposes of characterizing the Site.

Tables and figures in this section group data into either shallow or deep aquifer zones. While the aquifer underlying the Site is not physically segregated by an aquitard or change in stratigraphy, it has been grouped into shallow and deep aquifer zones to facilitate a discussion of the impacts identified at different depths. The shallow zone is defined as approximately 5 to 25 feet bgs. The deep zone is defined as 25 feet bgs and deeper.

6.1.1 Chlorinated Volatile Organic Compounds

The Site is contaminated with cVOCs attributable to releases from former dry-cleaning operations conducted at the source property. The date and number of PCE releases are unknown. PCE contamination is expected to travel away from the source property in the south to southeasterly direction following the direction of groundwater flow. PCE has traveled more than 500 feet from the source property. The groundwater plume is approximately 550 feet long and covers over three city blocks. It is approximately 100 to 150 feet wide and between 15 to 30 vertical feet thick. The maximum depth of contamination corresponds to the depth of the glacial till unit, which acts as a confining layer and a barrier to further vertical transport.

PCE releases are the source of all cVOC contamination at the Site. When PCE degrades in the environment, it forms TCE, *cis*- and *trans*-1,2-DCE, and vinyl chloride as its breakdown products. The final stage of contaminant breakdown is formation of ethane and ethene. PCE breakdown occurs naturally through a variety of processes, including biological degradation and abiotic degradation. At this Site, PCE breakdown has been accelerated via the implementation of IMs, as discussed in Section 3.1.3. Site groundwater data show four cVOCs are COCs in groundwater: PCE, TCE, *cis*-1,2-DCE, and vinyl chloride. As the plume continues to degrade over time, PCE and TCE concentrations are expected to decrease. *cis*-1,2-DCE, *trans*-1,2-DCE, and vinyl chloride concentrations are expected to increase in some wells and decrease in others, depending on the current well concentrations and trends for PCE and its degradation products.

The extent of cVOC contamination was bounded using analytical groundwater data and calibrated MIP detector responses from probes advanced in March 2020.[8] Collocated groundwater well and MIP locations were used to calibrate the level of response in the MIP detector to groundwater concentrations above or below Site CULs. Paired MIP and well data were collected at 12 locations, as shown on the chart in Figure 6.1. On this figure, groundwater well locations are colored according to the maximum exceedance factor for any cVOC result measured during the 2020 sampling event. MIP locations are colored according to the relative magnitude of response greater than background in each zone. If the observed response in a MIP location was low and displayed no peaks, the MIP location is colored gray and groundwater in that interval is presumed clean. Otherwise, the response profile was categorized as either large, moderate, or small. The presumed clean MIP response classification was confirmed using paired data from MIP-07 and UCCMW-29D and MIP-11 and UCCMW-24 for the high-level probe, and MIP-01 and BLMW-10 for the low-level probe.

Two low-level XSD detector MIP locations (MIP-02 and MIP-05) and two high-level detector MIP locations (MIP-07 and MIP-08) had moderate or large responses. Paired well data indicate groundwater exceeds cVOC CULs for one or more chemicals at each of these locations. These results confirm that moderate or large responses in either MIP detector correspond to elevated cVOC concentrations.

A small response was observed in four low-level XSD detector MIP locations: MIP-13 in the shallow zone, and MIP-01, MIP-05, and MIP-16 in the deep zone. Paired well results for these locations (UCCMW-27, UCCMW-33D, UCCMW-34D, and UCCMW-30D) meet cVOC CULs at each location. Based on these results, a small response measured using the low-level MIP XSD detector was reclassified as presumed clean.

The final MIP response classifications following calibration of data to Site data are shown in Figure 6.2. Figure 6.2 shows recent groundwater cVOC results used to delineate the overall lateral extent of the groundwater plume in the shallow and deep aquifer zones, along with the cVOC plume boundary in each zone. Figure 6.2 shows data for the most recent results measured at each location. For groundwater samples from all wells and from direct push locations within the plume, only results from the most recent sampling event collected after March 30, 2016, are shown. Data collected after this date represents post-bioinjection conditions. Outside the plume, groundwater samples from direct push locations collected on or after January 1, 2009, were considered. Locations are colored using the magnitude of the maximum exceedance factor among cVOC results measured at that location.

The cVOC groundwater plume is fully bounded in both the shallow and deep aquifer zone, as shown on Figure 6.2, and discussed in the following sections.

[8] The six locations in closest proximity to the source property (MIP-07 through MIP-12) were advanced using the high-level XSD detector. The remaining borings (MIP-01 through MIP-06, and MIP-13 through MIP-16) used the low-level detector.

6.1.1.1 Shallow Aquifer Zone

Contamination in the shallow zone of the aquifer originates from the source property. In this zone, the plume extends from the source property, across the Ranch Drive-In and Speedy Glass properties, and to the vacant lot to the south (Figure 6.2). Contamination is also present on NW 183rd Street, Main Street, and Bothell Way NE. The shallow groundwater plume is approximately 500 feet long and nearly 100 feet wide at its widest point. The maximum concentration of PCE measured in 2020 was measured in a source area well, UCCMW-18. In this well, PCE was measured at a concentration of 130 µg/L (exceedance factor of 26). Though this concentration is lower than pre-IM conditions in other source area samples (e.g., results at PP-14 were measured at 1,700 µg/L in 2013; Table 5.5), it indicates an ongoing source of contamination to downgradient groundwater.

PCE and vinyl chloride are the most widespread contaminants in the shallow aquifer zone. TCE and *cis*-1,2-DCE did not exceed their CULs during the most recent sampling event at any well, as shown on Figure 6.2. *trans*-1,2-DCE does not exceed its CUL in any recent groundwater sample (Table 6.1).

The upgradient extent of cVOC contamination in the shallow aquifer zone is well-bounded by groundwater results at UCCMW-16, UCCMW-15, and multiple groundwater samples from direct push locations completed in 2016 and 2017 (location IDs prefixed by EAIa- and EAIb- in Table 6.1). The eastern extent of the plume is bounded by presumed clean MIP field screening responses at locations MIP-15 and MIP-16; and by presumed clean MIP field screening responses MIP-14, and clean groundwater results at UCCMW-9, UCCMW-16, and UCCMW-23 to the west. The downgradient extent of the plume is bounded by presumed clean MIP field screening responses at MIP-01 through MIP-04 and MIP-06, and by clean groundwater results at BLMW-10.

Multiple IMs were completed to reduce cVOC concentrations in groundwater, as described in Section 3.1.2. Of these, the two bioinjection IMs were most successful at reducing cVOC concentrations. Bioinjection locations completed during each IM are shown on Figure 6.3, along with recent groundwater data for the shallow aquifer zone. Figure 6.3 shows trend information for PCE and vinyl chloride at each well sampled in 2020, with data from three or more recent groundwater monitoring events. Trend information was determined using a linear trend model. Trends in cVOC groundwater data for selected wells discussed throughout this section are presented in Figures 6.4a through 6.4e.

The two bioinjection IMs are responsible for the discontinuous cVOC concentrations measured across the plume. Had these IMs not been completed, contamination would be expected to be greatest at the source, and to generally stay the same or decrease with increasing distance from the source. Instead, PCE and vinyl chloride concentrations are at or near compliance in wells along NE 183rd Street and the first downgradient bioinjection row (i.e., UCCMW-21, UCCMW-20, UCCMW-5, UCCMW-24, UCCMW-23, and UCCMW-6), and are greater than their CULs at wells farther downgradient. For this reason, contamination in the shallow aquifer zone will be discussed in zones corresponding to the location of bioinjection rows and their downgradient wells. The location of each well relative to bioinjection rows is also listed in Table 6.1.

Source Area Bioinjection Row

PCE concentrations increased significantly in source area wells (UCCMW-17 and UCCMW-18) between April 2016 and March 2020 (Figure 6.4a and 6.4b). These results indicate that an ongoing source to groundwater is present on the source property. Upgradient groundwater wells UCCMW-15 and UCCMW-16 were not sampled in 2020, but contamination is not expected to be present in these wells. These wells should be sampled as part of treatment design to confirm that residual contamination on the source property is adequately addressed by the proposed treatment alternative. Until such data are collected, it is assumed that groundwater contamination is present between UCCMW-17/UCCMW-18 and UCCMW-15/UCCMW-16, as shown on Figure 6.2. Soil may represent an ongoing source to groundwater on the source property. Soil cVOC data are evaluated in Section 6.2.1.

Contamination from the source area may migrate and impact downgradient properties as represented by wells UCCMW-20, UCCMW-21, and UCCMW-5 (Figure 6.2). Two of these wells (UCCMW-5 and UCCMW-21) were sampled in 2020. UCCMW-5 is currently in compliance for all cVOCs. UCCMW-21 is in compliance for all cVOCs except vinyl chloride, which was detected at concentration of 0.25 µg/L (1.3 times the CUL). These results indicate that targeted groundwater treatment is not required outside of the source area. Continued monitoring is recommended downgradient of the source area to evaluate potential migration of residual source mass present on the source property. If remedial actions targeting the source area are effective, continued monitoring would be expected to show that groundwater concentrations along NE 183rd Street and in adjacent ROWs meet cVOC groundwater CULs.

First Downgradient Bioinjection Row

Three wells along the first downgradient bioinjection row were sampled in 2020: UCCMW-24, UCCMW-25, and UCCMW-7. PCE is in compliance at all three wells, indicating that bioinjections were effective in this portion of the plume (Figure 6.2). Bioinjections resulted in the conversion of PCE to its breakdown products, but dechlorination was not complete. Vinyl chloride exceeds its CUL at UCCMW-25 and UCCMW-7. Vinyl chloride was measured at concentrations of 0.75 µg/L in UCCMW-25 (exceedance factor of 3.8) and at concentrations of 1.9 in UCCMW-7 (exceedance factor of 9.5). Vinyl chloride concentrations are stable in UCCMW-25 (Figure 6.4c) and are increasing in UCCMW-7 (Figure 6.4d), indicating that additional treatment is required to reduce vinyl chloride concentrations to levels below the CUL along Bothell Way NE and near the Ranch Drive-In.

Figure 6.4d shows that PCE concentrations measured in UCCMW-7 decreased significantly between the post-injection baseline concentrations (28 µg/L) and August 2016, when PCE concentrations met the CUL at 0.87 µg/L. However, PCE concentrations increased in the following two quarterly groundwater monitoring events by 9.9 and 14 µg/L, respectively. This pattern of contamination is consistent with a site with multiple PCE releases and is indicative of additional contamination from upgradient sources migrating into the well.

Contamination from the source area has migrated across the Ranch Drive-In property. PCE contamination is present in downgradient well UCCMW-29, which is south to southeast of the source area at well UCCMW-18. This well was not targeted by earlier bioinjection IMs. As would be expected, PCE exceeds its CUL in this well, and vinyl chloride meets its CUL in this well. Concentrations in this well are significantly lower than concentrations measured in BB-2 (discussed in conjunction with groundwater quality in the second downgradient bioinjection row).

Preferential groundwater pathways along the public ROW may be present at this Site and may follow utility corridors in the shallow aquifer zone. Along the western plume boundary, approximately 135 feet south of the first bioinjection row, well BI-3 exceeds the groundwater CUL for vinyl chloride. Vinyl chloride in BI-3 was measured at a concentration of 0.52 µg/L (exceedance factor of 2.1). Vinyl chloride concentrations in this well are stable or decreasing, and concentrations of other cVOCs are well below their CULs. Concentrations are expected to continue to decrease over time with ongoing natural degradation processes. This well is used to delineate the western boundary of the plume.

Second Downgradient Bioinjection Row

Outside of the source area in the shallow aquifer zone, the greatest concentrations of PCE were measured in well BB-2 (concentration of 80 µg/L; exceedance factor of 16). BB-2 is located approximately 15 feet downgradient of the second bioinjection row and was targeted by April 2016 bioinjections (Figure 6.3). Stable to slightly increasing PCE concentrations in this well (Figure 6.4e) indicate that the depths targeted by bioinjections were too shallow to reduce PCE concentrations at BB-2, which was screened at a slightly greater depth than many other shallow groundwater wells.

The bioinjections in this area targeted groundwater between 5 and 14 feet bgs (Section 3.1.3.2), while BB-2 is screened from 9 to 19 feet bgs (Table 6.1). Bioinjections were successful in bringing cVOC concentrations measured at UCCMW-8 and UCCM-10 into compliance with CULs. Because UCCMW-10 is farther away from bioinjection locations than BB-2, it is assumed that groundwater contamination at BB-2 is present at depths of approximately 15 feet bgs and deeper, and that groundwater near the water table (from 5 to 15 feet bgs) likely meets CULs.

The significant difference in measured groundwater concentrations at BB-2 and UCCMW-10 confirms that previous groundwater IMs targeting the shallow aquifer zone did not have a significant effect on deeper groundwater.

Along the western plume boundary, approximately in line with the second bioinjection row, well UCCMW-9 can be used to bound the extent of the plume. Concentrations in this well are stable or decreasing and are expected to continue to decrease over time with ongoing natural degradation processes. This well is used to delineate the western boundary of the plume.

Third Downgradient Bioinjection Row

Results in two wells downgradient of the third bioinjection row are currently in compliance with cVOC CULs. These two wells are UCCMW-27 and BLMW-10. Concentrations in both these wells are either stable or decreasing. In particular, PCE concentrations are decreasing at UCCMW-27 and stable at BLMW-10. A direct push probe location analyzed in 2017 exceeds the CUL. This probe was completed downgradient of UCCMW-27 and upgradient of BLMW-10. Recent groundwater well data from UCCMW-27 and BLMW-10 are presumed to be more representative of current groundwater quality downgradient of the third bioinjection row along the downgradient plume boundary because the probe result was installed in spring 2017, shortly after the second bioinjection IM. Groundwater quality further downgradient of UCCMW-27 would be expected to come into compliance more slowly than at UCCMW-27, based on the increased distance from the bioinjection row.

Groundwater at UCCMW-32 exceeds the PCE CUL. PCE contamination in this well is at a relatively low level (8.6 µg/L; exceedance factor of 4.3). Because this well was installed in 2020, sufficient data do not exist to establish a trend. However, conditions are expected to decrease over time with ongoing natural degradation processes. Results at UCCMW-32 and BLMW-10 were used to delineate the southern extent of the plume.

Summary of PCE and Vinyl Chloride Contamination in the Shallow Aquifer Zone

Recent groundwater data and iso-concentration contours for PCE and vinyl chloride in the shallow aquifer zone are shown on Figures 6.5 and 6.6, respectively. These contours show the majority of the footprint of the shallow aquifer zone cVOC plume corresponds to areas where vinyl chloride exceeds its CUL. Areas where PCE concentrations exceed their CULs are generally well-bounded around particular wells.

Outside of the source area, PCE contamination remains only in areas where the groundwater plume is not targeted by former IMs (e.g., UCCMW-29, UCCMW-32) or beyond the zone of influence of former IM injection locations (e.g., MIP-10, UCCB-4). These data indicate that prior IMs have succeeded in reducing PCE concentrations via reductive dechlorination; but additional action is required to complete the final reductive dechlorination step to convert vinyl chloride to ethene. Recent data at MIP-13 and UCCMW-8 were used to determine the extent of the vinyl chloride iso-concentration contours shown on Figure 6.6. Data at these two locations are more recent than data at UCCMW-26 and UCC-B8, respectively, and can be used to demonstrate that groundwater in the vicinity of the second and third bioinjection rows is in compliance with the vinyl chloride CUL.

6.1.1.2 Deep Aquifer Zone

Contamination in the deeper zone of the aquifer has migrated from the source area to the source property. PCE sinks as it migrates with groundwater because it has a lower density than water. This means that contamination is generally expected to be present in deeper zones of the aquifer with increasing distance from the source area. This expectation is consistent with analytical and field screening data collected at the Site, which confirm that contamination is not present in the deep aquifer zone on the source property or the property south of NE 183rd St. This conclusion is confirmed by wells installed in the source area (UCCMW-4D) and on the property south of NE 183rd St (UCCMW-28D and UCCMW-29D); and by MIP data from the high-level XSD detector MIP locations (MIP-07 through MIP-12). Only one MIP location (MIP-08) exhibited a response in the deep aquifer zone. The response occurred at a depth of approximately 36 feet bgs and was classified as presumed clean, following calibration of the MIP detector responses to Site data.[9] Nearby MIP locations MIP-07, MIP-09, MIP-10, MIP-11, and MIP-12 exhibited a response profile consistent with presumed clean groundwater quality (no peaks in XSD response).

In the deep aquifer zone, the plume extends from the Speedy Glass property, across Main Street, to Lot E, F, G, which is the vacant lot to the south (Figure 6.2). The eastern extent of the plume is bounded by presumed clean MIP field screening responses at locations MIP-15 and MIP-16. The plume's western extent is bounded by clean results at UCCMW-32D and presumed clean field responses at MIP-05. The downgradient extent of the plume is bounded by presumed clean MIP field screening responses at MIP-03, MIP-04, and MIP-06; and by clean groundwater results at UCCMW-33D.

Within the boundaries of the deep aquifer plume, cVOCs exceed their CULs in three wells: UCCMW-36D, UCCMW-31D, and UCCMW-34D. These wells were installed in 2020. UCCMW-36D and UCCMW-31D are closer to the source area and were screened at depths of 15 to 30 feet bgs and 18 to 28 feet bgs, respectively (Table 6.1). UCCMW-34D is screened at depths of 35 to 50 feet bgs, consistent with the maximum response interval of nearby MIP boring locations.

The extent of PCE contamination in the deep zone is shown on Figure 6.5, along with iso-contours interpolated from available data. PCE was detected at concentrations ranging between 18 and 25 µg/L (exceedance factors between 3.6 and 5.0) in UCCMW-36D, UCCMW-31D, and UCCMW-34D. These results are consistent with limited recent probe data collected in the deep aquifer zone at locations UCCB-2, UCCB-4, and UCCB-8, which had measured concentrations in the deep aquifer zone generally ranging between 9.3 and 35 µg/L (exceedance factors between 1.9 and 7). The agreement between 2017 probe data and more recent monitoring well data confirms that concentrations in the deep aquifer are stable. Because IMs were not designed to target the deep aquifer zone, moderate responses measured at low level XSD detector MIP locations MIP-13 and MIP-02 were assumed to correlate to PCE concentrations of approximately 2 to 5 times the CUL when drawing iso-contours.

The extent of vinyl chloride contamination in the deep zone is shown on Figure 6.6, along with iso-contours interpolated from available data. Vinyl chloride was detected at concentrations exceeding the CUL at two locations: UCCMW-36D and UCCMW-31D. Concentrations in both locations are greater than concentrations measured in nearby recent probe samples (at UCCB-8 and UCCB-2, respectively), which met the vinyl chloride CUL when sampled in 2017. The greatest vinyl chloride result was measured in UCCMW-36D at a concentration of 0.92 µg/L (exceedance

9 MIP calibration is further described in Section 6.1.1.

factor of 4.7). Vinyl chloride in UCCMW-31D was measured at a concentration of 0.24 µg/L (exceedance factor of 1.2).

The majority of cVOC contamination in the deep aquifer zone is PCE. PCE and vinyl chloride are the only two cVOCs that exceed their CULs in any deep aquifer zone sampling locations (Figure 6.1). Though vinyl chloride is present at levels of concern, the area impacted by vinyl chloride shown on Figure 6.6 is significantly smaller than the area impacted by PCE shown on Figure 6.5.

6.1.2 Arsenic

There are no current or former sources at the Site that would contribute to a release of arsenic. However, elevated arsenic concentrations are expected to be present within the boundaries of the cVOC plume as a result of reducing geochemical conditions caused by IMs performed at the Site. Reducing groundwater conditions are a known potential cause of elevated levels of arsenic in groundwater, as these conditions can release naturally occurring arsenic in native soils into solution. This process is reversible; arsenic concentrations are expected to decline to natural background levels after the aquifer returns to its pretreatment geochemical conditions.

Arsenic was detected in groundwater at concentrations exceeding its groundwater CUL in 10 monitoring wells sampled in 2020. Arsenic groundwater data are presented on Figure 6.7. As shown on Figure 6.7, locations with the greatest detected arsenic concentrations occur in the shallow aquifer zone in wells immediately downgradient of bioinjection locations. The two wells with the greatest measured concentrations of arsenic are UCCMW-24 and UCCMW-25, which had concentrations of 11 µg/L and 17 µg/L, respectively. These two wells are the only wells where arsenic concentration exceeds the groundwater CUL by an exceedance factor greater than 2.

Arsenic was measured at concentrations greater than 6.0 µg/L at four additional groundwater monitoring well locations: UCCMW-4D, UCCMW-21, UCCMW-7, and UCCMW-27. Each of these locations are immediately downgradient of bioinjection locations. UCCMW-4D is screened in the deep interval and is not expected to be significantly affected by bioinjection IMs; however, its ORP is low (-19.2 mV; Table 6.2), indicating that reducing conditions are present at this location. Tracer tests conducted at injection well locations INJ-1 through INJ-6 may be affecting geochemistry in deep groundwater at this location (refer to Section 3.1.3.2).

Other locations with elevated arsenic concentrations are within the range of natural background, with concentrations measured between 5.0 and 6.0 µg/L. Natural background in the area is expected to range between 5.0 and 6.0 µg/L based on the following lines of evidence:

- Two nearby cleanup sites, the Riverside TPH and Riverside HVOC sites, concluded that naturally occurring arsenic concentration (area background) is 6.6 µg/L for the area (HWA 2017b).
- Background arsenic levels were calculated using 19 results from 12 monitoring well locations that are outside the boundaries of the cVOC plume. These locations were selected in accordance with WAC-173-340-709(2). Figure 6.8 shows the monitoring

wells whose data were used to calculate the background arsenic concentration. The background arsenic dataset follows a lognormal distribution, as shown in the histogram on Figure 6.8. For data following a lognormal distribution, background is calculated as the minimum between the upper 90th percentile and 4 times the 50^{th} percentile, per WAC 173-340-709(3)(c). The area background arsenic concentration calculated using these data is 5.9 µg/L.

6.2 SOIL

This section delineates the nature and extent of soil contamination using data presented in Table 6.3 and in figures referenced throughout this section.

Table 6.3 includes data collected after January 1, 2009, for all soil COCs. For completeness, this table also includes data for soil COPCs that did not become COCs. Data for soil COPCs may be discussed in the text but are not used to bound the nature and extent of contamination for purposes of characterizing the Site. For simplicity, soil data were grouped using the same shallow and deep classifications applied to groundwater data.

Soil contamination for site COCs is shown on Figure 6.9.

6.2.1 Chlorinated Volatile Organic Compounds

PCE is the only chlorinated solvent identified as a soil COC. It is also the only cVOC that was detected at concentrations exceeding its soil CUL. PCE was detected at concentrations exceeding the CUL in seven samples from six locations. All these locations are located on or near the source property, as shown on Figure 6.9. The figure lists the maximum PCE result at each location that exceeds the CUL.

The maximum detected concentration of PCE occurs at a depth of 3 feet bgs at location EAIb-B15 in the northwest corner of the source property. PCE was measured at a concentration of 0.21 mg/kg (exceedance factor of 4.2). Results collected in deeper samples at this location (at 8 and 14 feet bgs) meet the CUL. Contamination is bounded by samples on the north, east, and south at locations PP-12, PP-13, EAIb-B14, and EAIb-B11. These locations are all within 10 to 20 feet of location EAIb-B15, indicating that soil contamination in this area is well-bounded.

PCE also exceeds its CUL in four samples collected from the southern portion of the source area at locations PP-30, PP-24, PP-1, and PP-7 (Figure 6.9). Concentrations exceeding the CUL in these samples range from 0.057 mg/kg to 0.12 mg/kg (exceedance factors of 1.1 to 2.4). In 2016, samples were collected from locations approximately 10 feet to the north and south of PP-30; all samples at these locations are in compliance with the CUL, indicating that natural attenuation has likely already reduced PCE concentrations at this location to levels that are below the PCE CUL.

Contamination at the remaining three locations (PP-24, PP-1, and PP-7) is bounded in all directions by samples collected within 20 feet of these locations to the north, south, east, and west. Moving in a clockwise direction, these locations are UST-SS-5, PP-23, PP-11, PP-9, PP-5, PP-2, and EAIb-B5 (Figure 6.9). The maximum depth of contamination in this area is approximately 9 feet bgs at location PP-1. Contamination is vertically delineated at each location: the deepest sample analyzed in each core meets the CUL.

PCE contamination in soil on the source property may be an ongoing source to groundwater. However, because contamination is bounded in the vadose zone and the area is paved, leaching is not expected to be a major source of contamination to groundwater.

The only other location where PCE exceeds its soil CUL is PSD-B3. This location is in the ROW near the intersection of NE 183rd Street and Bothell Way NE, approximately 90 feet southwest of the source property (Figure 6.9). Contamination at this location was measured at concentrations up to 0.15 mg/kg (exceedance factor of 3) at depths between 4 and 7 feet bgs. Contamination at this location is not vertically bounded. Concentrations in the deepest sample (from 6 to 7 feet bgs) were measured at 0.12 mg/kg (exceedance factor of 2.4). It is bounded by locations ESD-B1 and ESS-B1, which are approximately 20 feet southeast of this location. Releases of PCE are not documented or suspected at this sample location in the ROW. PCE exceeding the CUL was detected in soil below the water table (present at approximately 4 feet bgs during the June 2020 event) and is attributed to back-diffusion from historically highly PCE-contaminated groundwater in the areas immediately downgradient of the source property. It is expected that PCE in saturated soil has re-dissolved since collection of soil samples in 2011 due to decreased PCE concentrations in shallow groundwater following the IMs completed in 2016. Shallow soil above the water table in the vicinity of PSD-B3 would have been removed during recent roadway realignment work.

6.2.2 Total Petroleum Hydrocarbons

This section evaluates soil TPH data relative to CULs to establish the nature and extent of TPH contamination in soil. Additionally, this section evaluates soil TPH data relative to SLs developed for protection of ecological receptors to establish whether an institutional control is required to protect against potential future ecological exposure.

6.2.2.1 Nature and Extent of Soil Contamination Relative to Protection of Human Health

TPH data are shown relative to TPH CULs on Figure 6.9. For completeness, Figure 6.9 includes results for both GRO, which is a soil COC, and DRO+ORO. DRO+ORO is not a soil COC but exceeds its CUL in a few samples.

GRO exceeds its CUL in a single sample collected from location UCCMW-36D. However, the detected concentration in this sample was 450 mg/kg (exceedance factor of 15; Table 5.12). Petroleum-impacted soil was encountered at depths ranging between 2 and 3 feet bgs. The deeper sample collected from this location, at depths of 10.5 to 11.5 feet bgs, meets the GRO CUL.

UCCMW-36D is located on the Speedy Glass property, proximate to previous excavations to remove petroleum hydrocarbons. Previous detections of GRO at the Speedy Glass property were attributed to a cleaning compound similar to Pine-Sol by Farallon Consulting in 2002 (HWA 2018a). The contamination measured at location UCCMW-36D is likely attributed to the former UST or operations at the Speedy Glass property.

Total DRO+ORO was also detected at concentrations exceeding its CUL in the 2 to 3 feet bgs sample collected from location UCCMW-36D. Total DRO+ORO did not become a COC based on its low frequency and magnitude of detection in the Site dataset. The maximum detected result (3,600 mg/kg) was in the sample collected from UCCMW-36D. This result exceeds the CUL by a factor of less than 2. Site-wide, only one other sample—CDM-B29, also collected on the Speedy Glass property—exceeded the total DRO+ORO CUL.

These samples confirm that TPH contamination is present on the Speedy Glass property; however, TPH contamination measured in UCCMW-36D is not associated with activities at the source property. This conclusion is supported by recent sampling of the source property and across the Site. GRO was not detected in any sample collected on the source property in 2016. Total DRO+ORO was detected in one soil sample on the source property in 2016; however, these results were low level (less than the CUL) and well bounded both laterally and vertically. Additionally, neither GRO nor total DRO+ORO were detected in any other sample collected in 2020. Thus, TPH contamination on the Speedy Glass property is not associated with the Ultra Custom Care Cleaners Site. Because TPH contamination is shallow, it is unlikely to impact groundwater or cVOC treatment. TPH contamination related to sources originating on the Speedy Glass property will not be further discussed or considered in this report.

6.2.2.2 Nature and Extent of Soil Contamination Relative to Protection of Ecological Receptors

Total DRO+ORO was detected at concentrations exceeding the SL protective of ecological receptors at 10 locations within the study area, as shown on Figure 6.10.

Two of these locations are present on the Speedy Glass property and were previously discussed with respect to exceedances of the MTCA Method A criterion for protection of human health. Of the remaining eight locations, seven are associated with other Ecology cleanup sites and are located under pavement in roadway or City rights-of-way areas that will remain paved in perpetuity.

Only one sample, collected at a depth of 4 feet bgs from location EAIb-B19, is located on the source property and potentially associated with activities at the Site. EAIb-B19 is in the northwestern corner of the source property. DRO+ORO results at this location were measured at concentrations near the soil SL (measured result of 510 mg/kg; exceedance factor of 1.1). The DRO result contributing to the DRO+ORO sum was CN-qualified by the laboratory, indicating chromatographic interference that is not indicative of a typical diesel chromatographic pattern. The sample with elevated detections of pine oil and motor oil compounds was associated with an historical catch basin location in the vicinity of EAIb-B19. This result was previously determined to be caused by Pine-Sol cleaning compounds (EAI 2016) containing distilled pine oil, which is detectable using TPH analytical methods. ORO measured in this sample were determined to be residual motor oil likely originating from incidental surface releases associated with former vehicle maintenance activities performed off-site east of the source property (EAI 2016). Other TPH constituents (e.g., GRO, BTEX) were not detected in this sample, indicating that the detected hydrocarbons in the diesel-range are attributable to distilled pine oil in the localized area around the catch basin. The total area of soil containing distilled pine oil associated with the Site is less than 350 square feet. Accordingly, an institutional control to maintain a wildlife barrier preventing potential future exposure to contaminated soil by ecological receptors is not required per WAC 173-340-7492(2)(a)(i). Additionally, pine oil does not pose a risk to ecological receptors at the concentrations measured on-site.

7.0 Areas of Concern and Feasibility Study Considerations

7.1 AREAS OF CONCERN

AOCs for development of remedial alternatives were defined for the Site based on the nature and extent of contamination described in Sections 6.1 and 6.2 for groundwater and soil COCs, respectively. Contamination within each AOC will be evaluated as part of the FS. Each AOC will be evaluated in the FS during the development and analysis of comprehensive site remedial actions.

AOCs encompass Site soil and groundwater that currently exceeds CULs for cVOCs or arsenic. AOCs are illustrated on Figure 7.1. The AOCs shown on Figure 7.1 are described as follows.

There are six discrete groundwater hotspots where one or more cVOCs exceed their respective CULs. If left untreated, groundwater within the AOCs shown on Figure 7.1 would be expected to migrate downgradient (in a south-southeast direction), contaminating areas that are currently in compliance with CULs. The extent of the area where cVOCs contamination is present or would be expected to occur is represented by the shallow and deep aquifer zone plumes shown on Figure 6.2.

Source Property cVOC AOC. The Source Property cVOC AOC includes soil and groundwater contamination located within the source property. There are three localized soil hotspots on the source property. All three soil hotspots are contaminated with PCE at concentrations that exceed CULs developed for protection of groundwater. PCE contamination in these areas is well-bounded and is typically confined to the vadose zone at depths of less than 8 feet bgs except in the southernmost hotspot where contamination may extend to approximately 9.5 feet bgs. Shallow soil contamination in the vadose zone at depths less than 3 feet bgs is unlikely to represent an ongoing source to groundwater while the source property remains paved but is included in this AOC as a potential future source to groundwater via infiltration.

Groundwater contamination in the Source Property cVOC AOC is present in the shallow aquifer zone on the southern parcel of the source property. PCE in groundwater was measured at concentrations of 130 µg/L in the most recent monitoring event.

Shallow Groundwater cVOC AOC. Groundwater contamination in the Shallow Groundwater cVOC AOC is present in the shallow aquifer zone at properties and City rights-of-way south of the source property. Contamination in this zone is deepest in the hotspot located on the southern portion of the Speedy Glass property, where PCE contamination remains at depths of 10 to 19 feet bgs.

Contamination in this AOC was partially addressed by previous groundwater IMs. As a result of these IMs, groundwater contamination in the shallow aquifer zone is present in four discrete groundwater plumes or hotspots, as shown on Figure 7.1. Groundwater contamination on the Lot E, F, G property is delineated based on probe data collected in April 2017. Current groundwater quality measured at nearby groundwater wells UCCMW-27 and BLMW-10 is in compliance with CULs, indicating that the probe result may not represent current groundwater quality.

Residual low-level soil contamination associated with this AOC is present in the City ROW near the intersection of Bothell Way NE and NE 183rd Street. This contamination is suspected to have migrated with groundwater and partitioned onto soil. This residual contamination is well-bounded and located under pavement but is included in this AOC as a potential future source to groundwater, even though it is unlikely to represent an ongoing source to groundwater.

Deep Groundwater cVOC AOC. Groundwater contamination in the Deep Groundwater cVOC AOC is present in the deep aquifer zone at properties and City rights-of-way south of the source property. Contamination in this AOC extends from the Speedy Glass property, across Main Street, and three quarters of the way across the adjacent City-owned property to the south. The maximum depth of contamination in the deep aquifer zone is approximately 35 feet bgs. The maximum depth of contamination corresponds to the depth of the confining layer present across the deep groundwater plume extent.

Arsenic AOC. There are three discrete groundwater hotspots where arsenic exceeds its CUL, which together constitute the arsenic AOC. Two arsenic hotspots are in the shallow aquifer zone and one hotspot is in the deep aquifer zone. Each of these hotspots is immediately downgradient of bioinjection locations where groundwater geochemistry was intentionally altered to create reducing conditions. This change in geochemistry has caused naturally occurring arsenic present in soil to leach into groundwater at levels greater than natural background. This process is reversible. When geochemical conditions of the aquifer return to pre-injection conditions, arsenic concentrations in groundwater within these AOCs is expected to return to natural background levels.

7.2 FEASIBILITY STUDY CONSIDERATIONS

The FS should consider the following RI findings when evaluating remedial alternatives:

- The RI confirms soil and groundwater contamination (i.e., soil or groundwater with results that exceed CULs) is present at the source property, and that an ongoing source of groundwater contamination is present on the source property. Soil contamination from the Site is also present at one downgradient location present in the right-of-way near the intersection of Bothell Way NE and NE 183rd Street. Groundwater contamination is present on multiple downgradient properties.
- There are no current exposure pathways: contaminated soil is covered by pavement, and contaminated groundwater results do not exceed vapor intrusion CULs protective of current (commercial) property use. Additionally, groundwater is not being used for drinking water or domestic uses.
- Shallow groundwater at the Site exceeds vapor intrusion SLs protective of potential future unrestricted land use (Tables 5.1 and 5.2). The FS should evaluate whether ICs or other development restrictions are required; or if groundwater will reach the vapor

intrusion SLs in a suitable time frame such that future land use restrictions are not necessary.

- Total DRO+ORO contamination in site[10] soil exceeds the SL for protection of ecological receptors (Figure 6.10). Only one location is potentially associated with the Site. This sample, collected at a depth of 4 feet bgs from location EAIb-B19, is located on the northwestern corner of the source property, near the PCE hotspot shown on Figure 6.9. A wildlife barrier (to prevent future exposure to contaminated soil by ecological receptors) is not required per WAC 173-340-7492(2)(a)(i), because the total area of soil contamination associated with the Site is less than 350 square feet.

[10] TPH contamination associated other cleanup sites and within the Speedy Glass property in the vicinity of the former gasoline UST is not considered to be part of the Ultra Custom Care Cleaners Site, as described in Section 6.2.2.

8.0 Feasibility Study

The remainder of this document presents the FS for the Site, which has been developed in accordance with MTCA (WAC 173-340-350(8)). The purpose of the FS is to evaluate cleanup actions that are protective of human health and the environment through elimination, reduction, or control of risks posed through potential exposure and migration pathways present at the Site in full compliance with MTCA and its implementing regulations. Based on this evaluation, a sitewide preferred cleanup action is recommended to Ecology for consideration in development of the Cleanup Action Plan for the Site.

The RI sections of this report identify the applicable pathways at the Site, COCs, proposed cleanup standards, and the AOCs. In addition, Sections 3.1.3 and 3.2 also provide a summary of completed interim cleanup actions that have reduced contamination concentrations throughout the Site. The FS provides detail regarding the development and evaluation of cleanup action alternatives for the Site based on the current nature and extent of contamination and the CSM described in the RI portion of this document.

The current and future land use plans for the Site that were considered in developing the FS and cleanup action alternatives are contained within the City of Bothell's Downtown Core Redevelopment Plan and allow for both commercial and residential land use (BMC 12.64.101). Groundwater at the Site exceeds potable drinking water criteria.

8.1 REMEDIAL ACTION OBJECTIVES

RAOs for the Site were developed to specifically identify goals that should be accomplished to meet the minimum requirements of the MTCA Cleanup Regulations (WAC 173-340).

The following RAOs are defined for the Site:

- Protect humans and the environment (ecological receptors) from exposure to Site contamination that exceeds applicable CULs.
  - Address residual contaminated soil to reduce exposure to hazardous substances via direct contact.
  - Reduce concentrations of hazardous substances in groundwater to mitigate human health risk that could result from consumption of drinking water impacted by groundwater contamination at the Site.
  - Reduce, to the extent practicable, concentrations of cVOCs in shallow groundwater to reduce or eliminate the potential for vapor intrusion into commercial buildings located above areas of the Site with shallow groundwater impacts.
- Prevent transport of contaminants from the Site by groundwater migration.
- Reduce, to the extent practicable, concentrations of COCs in soil that are potential sources of continuing groundwater contamination.

- Remediate contaminants in a manner that (a) does not interfere with or restrict proposed Site development and future use plans and (b) minimizes impacts to private businesses during remedial construction. This includes allowing for redevelopment of the City property (source property and Lot E, F, G).
- Properly manage any contaminated soil or groundwater generated during Site cleanup and ensure that these activities do not result in unacceptable exposure to contamination.
- Comply with local, state, and federal laws (ARARs; WAC 173-340-710) and site-specific cleanup standards. ARARs specific to the cleanup are described in Section 12.5 and are limited to applicable federal and state laws and those that Ecology determines are relevant and appropriate.
- Provide for compliance monitoring to evaluate the effectiveness of the preferred cleanup action and to evaluate when the cleanup standards are met.

Each remedial alternative proposed in this FS will be evaluated for its ability to accomplish the RAOs listed earlier.

8.2 AREAS OF CONCERN

AOCs were developed in the RI based on the nature and extent of Site COCs (i.e., cVOCs and arsenic) using standard MTCA POCs for both soil and groundwater. Refer to Section 7.1 for details about each AOC. A summary of each AOC is presented along with a description of physical features that will affect the remedy or design. The AOCs and previous bioinjection locations are shown on Figure 7.1.

- **Source Property cVOC AOC**: The source property cVOC AOC includes cVOC groundwater contamination in the shallow aquifer zone located on the southern parcel of the source property. Additionally, the source property AOC includes soil contamination that may represent an ongoing source to groundwater. Soil contamination in this AOC is bounded vertically at depths of 9 feet bgs or less. Current soil concentrations may have improved as a result of natural attenuation and groundwater IMs performed in this area. Additional sampling may be conducted during remedial design to confirm whether soil is an ongoing potential source to groundwater.

  There are no buildings on the source property, and the source property is currently paved. There is currently no active exposure pathway to soil or groundwater contamination in this AOC.

- **Shallow Groundwater cVOC AOC**: Contamination in this AOC has migrated from the source property and is covered by buildings or pavement. Groundwater contamination is present in the shallow aquifer zone at commercial properties and City ROW south-southwest of the source property. Groundwater contamination is deepest on the southern portion of the Speedy Glass property.

This AOC also includes residual, isolated low-level soil contamination located in the City ROW near the intersection of Bothell Way NE and NE 183rd Street, which is attributed to likely back-diffusion from historically highly PCE-contaminated groundwater. Soil contamination in this AOC is bounded vertically at depths of 9 feet bgs or less. Current soil concentrations may have improved as a result of natural attenuation and groundwater IMs performed in this area. Additional sampling may be conducted during remedial design to confirm whether soil is an ongoing potential source to groundwater in this area.

There is currently no active soil or drinking water exposure pathway in this AOC. Shallow groundwater exceeds residential vapor intrusion SLs near the Ranch Drive-In but does not exceed commercial vapor intrusion SLs.

- **Deep Groundwater cVOC AOC**: Groundwater contamination in this AOC is present in the deep aquifer zone at commercial properties and City rights-of-way south of the source property. Deep groundwater cVOC contamination extends from the Speedy Glass property, across Main Street, and three quarters of the way across Lot E, F, G (the adjacent City-owned property to the south). The maximum depth of contamination in the deep aquifer zone is approximately 35 feet bgs and corresponds to the depth of the confining layer present across the deep groundwater plume extent. There is currently no active groundwater exposure pathway associated with this AOC.
- **Arsenic AOC.** There are three discrete groundwater hotspots where arsenic exceeds its CUL, which together constitute the arsenic AOC. Arsenic hotspots are immediately downgradient of bioinjection locations where groundwater geochemistry was intentionally altered to create reducing conditions. Arsenic AOCs are paved or covered by buildings. There is currently no active groundwater exposure pathway associated with this AOC.

9.0 Remedial Technology Identification and Screening

Remedial technologies were reviewed and considered to address both soil and groundwater contamination at the Site. Sections 9.1 and 9.2 identify and briefly describe the most common passive and active remedial technologies for cleanup of the site-specific COCs at concentrations measured at the Site, and also describe the application and limitations of each technology. The site-specific groundwater COCs identified in Section 6.0 include four cVOCs (PCE, TCE, *cis*-1,2-DCE, and vinyl chloride) and arsenic. PCE and GRO are soil COCs. However, as discussed in Section 6.2.2, GRO is not associated with the Site and is therefore not targeted for cleanup.

A preliminary technology screening is completed in Section 9.3 to eliminate technologies that do not meet RAOs applicable to the Site, are not technically feasible, or do not address the types of contamination present.

9.1 IDENTIFICATION AND DESCRIPTION OF PASSIVE TECHNOLOGIES

The following passive remedial technologies may be applicable for remediation of soil and groundwater contamination at the Site. These passive technologies do not remove contaminant mass. They are characterized by their ability to reduce or eliminate potential exposure pathways.

9.1.1 No Action

No action indicates that no active or passive remedial measure would be implemented and provides a reference for comparison of the benefits of other remedial technologies. Any contaminant mass reduction that occurs as a result of this technology is due to natural processes (e.g., volatilization, dispersion, or natural degradation). This technology differs from monitored natural attenuation because it does not include collection of samples to monitor changes in contaminant concentration.

9.1.2 Institutional Controls

ICs are physical, legal, and administrative measures that are implemented to minimize or prevent human exposure to contamination by restricting access to the Site. ICs often involve deed restrictions or covenants, site advisories, use restrictions, or consent decrees (CDs) and would be implemented at the Site to limit or prohibit activities that may (a) interfere with the integrity of any cleanup action or (b) result in exposures to hazardous substances at the Site. ICs are typically implemented in addition to other technologies when those technologies leave COCs on-site at concentrations that could pose a risk to potential receptors. ICs may include documents such as a Soil Management Plan that would describe how contamination that remained on-site would be addressed if disturbed in the future.

ICs are applicable to all groundwater and soil COCs at the Site.

9.1.3 Engineering Controls

Engineering controls are physical measures constructed to block exposure pathways and reduce or eliminate contaminant exposure to potential receptors. Engineering controls can be used as permanent measures or as temporary measures to prevent exposure to the contamination until a permanent cleanup is implemented.

Engineering controls vary in nature and scope. Examples of engineering controls include installation of a vapor mitigation system or barrier during building construction, placement of an indicator layer on top of contaminated soil, the use of engineered equipment or access controls (e.g., fencing) to prevent or limit contact with contaminated soil, or installation of pavement and a stormwater conveyance system to minimize infiltration of stormwater through contaminated soil.

Engineering controls require maintenance in perpetuity to assure proper functioning and prevent exposure. They are typically implemented with ICs and other more permanent technologies. The engineering controls technology is applicable to all Site soil and groundwater COCs.

9.1.4 Monitored Natural Attenuation

Monitored natural attenuation involves regular groundwater sampling and analysis to monitor the results of one or more naturally occurring physical, chemical, or biological processes that reduce the mass, toxicity, volume, and/or the concentration of chemicals in site soil and/or groundwater. These naturally occurring processes may include biodegradation; dispersion; dilution; sorption; volatilization; and chemical or biological stabilization, transformation, or destruction of contaminants. Monitored natural attenuation may be implemented as a stand-alone remedial technology or in combination with other remedial technologies.

Monitored natural attenuation is applicable to all groundwater contaminants at the Site.

9.1.5 Surface Capping

When implemented with ICs, capping could be used to address soil COCs with the goal of controlling direct contact with soil and reducing infiltration and contaminant leaching to groundwater. Surface capping design would likely vary by location and future expected Site use. Cap technologies can consist of impermeable or semipermeable paving or placement of permeable clean compacted soil or gravel over contaminated soil.

Surface capping is applicable to all Site soil and groundwater COCs.

9.2 IDENTIFICATION AND DESCRIPTION OF ACTIVE TECHNOLOGIES

The following active remedial technologies may be applicable for remediation of soil and groundwater contamination at the Site and for long-term protection of potential receptors from exposure to contaminated soil and groundwater.

9.2.1 Air Sparging

Air sparging is typically used to treat groundwater contaminated with volatile chemicals including cVOCs. Air is injected into the contaminated aquifer through injection wells, where it bubbles upward through channels in the soil column, creating an air stripping effect that moves chemicals in groundwater to the air bubble, which migrates to the vadose zone where it can be recovered and treated. Air sparging is limited by contaminant depths and works best in homogenous sandy soil formations that limit preferential pathways for air flow.

Air sparging would be effective at remediating shallow cVOC groundwater contamination at the Site; however, its effectiveness may be limited in the areas of the Site without homogenous sandy soil and in deep groundwater.

9.2.2 Chemical Oxidation

Chemical oxidation involves injecting oxidizing agents such as ozone, hydrogen peroxide, or permanganate into the subsurface to rapidly destroy organic chemicals. Chemical oxidation can remove contaminant mass in soil but is most effective in treating chemicals in groundwater. Applicability of chemical oxidation is dependent on soil types and the homogeneity of the subsurface because injected solutions tend to follow preferential pathways through heterogeneous soil. The chemical oxidant itself, however, does not alter the flow path or velocity of groundwater through the treatment area. The volume of injected agent and the rate of chemical injection are dependent on the subsurface conditions at the Site. Injection points may be installed as permanent injection wells or may be injected via temporary borings. The effectiveness of injections is dependent on site-specific conditions, which typically are heterogeneous, making it difficult to obtain an even and effective distribution of the oxidant. Further, a high soil oxidant demand (i.e., high soil organic content that consumes the added oxidant) or other oxidizer sink may significantly reduce the effectiveness of chemical oxidants.

The chemical oxidation technology was previously implemented at the source property and was not effective at reducing concentrations of cVOCs in groundwater at the Site (refer to Section 3.1.3.1).

9.2.3 In Situ Groundwater Treatment by Bioremediation

Bioremediation relies on the degradation of contaminants through biological activity and chemical reactions. Biological treatment via enhanced reductive dechlorination (ERD) is a viable technology for cVOC plume treatment. Injection of substrates can be distributed either through installed injection wells or temporary injection probes.

Bioremediation relies heavily on subsurface site conditions where injection volumes, substrate type, and nutrients must be designed on a site-specific basis and success is highly dependent on the ability to deliver the substrate to the affected areas. Injection of substrates does not alter the flow path or velocity of groundwater through the treatment area. Suitable injected bioremediation substrates may include a wide array of consumer and industrial products as well as purpose-manufactured reagents designed to slowly release electron donors or acceptors. Purpose-manufactured bioremediation products may also be amended with emulsifying agents to improve the dispersion and timed release of the reagent. In situ bioremediation may also be augmented with injection of a microbial consortium of species capable of degrading the target contaminant under site-specific geochemical conditions.

Bioremediation has been proven effective for enhancing and accelerating reduction of PCE concentrations in groundwater at similar sites and has been successfully implemented during interim measures completed at this Site (refer to Section 3.1.3.2). Natural dechlorination processes have been observed in portions of the plume (as evidenced by the presence of vinyl chloride in portions of the cVOC plume), so it would likely be effective in accelerating dechlorination of cVOC-contaminated groundwater. In situ bioremediation would be effective at remediating cVOC groundwater contamination at the Site.

9.2.4 In Situ Groundwater Treatment by Activated Carbon

Activated carbon in situ technologies describe an emerging remediation technology involving the use of activated carbon to adsorb organic contaminants (i.e., cVOCs). Activated carbon is typically combined with a reactive amendment (chemical and/or biological) and injected into the subsurface to create a passive treatment zone that results in both adsorption and degradation of contaminant mass. This technology is mainly applied to groundwater plumes but can also be used to treat residual sources in low-permeability soils. There are currently four commercial activated carbon-based products on the market offered by three vendors:

- Trap & Treat BOS-100 and BOS-200 by Remediation Products, Inc
- CAT-100 by Remediation Products, Inc
- COGAC by Remington Technologies
- PlumeStop by Regenesis

These products are highly variable in composition and contain proprietary mixtures of activated carbon and additives such as stabilizers, nutrients, ZVI, and bacteria. Activated carbon in these products range from granular to colloidal in particle size. Selection of an appropriate particle size is related to the permeability of the targeted subsurface. Design and application are highly dependent on adequate site characterization; however, contaminant concentration reduction is typically rapid. Injection of activated carbon does not alter the flow path or velocity of groundwater in the treatment area.

Activated carbon in situ technologies would be effective in remediating cVOCs in groundwater.

9.2.5 Low-Permeability Barrier Wall

Barrier wall containment technologies are implemented to contain chemicals in place and typically do not involve further source area treatment. Vertical containment barriers, such as slurry walls, are placed in the subsurface to cut off groundwater flow and stop chemical migration. Slurry walls are typically constructed vertically from the ground surface to a depth greater than the chemical plume in soil and groundwater, or until the wall encounters a confining layer. The slurry wall is constructed from a low-permeability material, typically a soil and bentonite clay mixture, that does not degrade in the environment. Containment remedies are often implemented in combination with permanent pumping remedies to maintain inward gradients within the contained area and provide hydraulic control. Barrier walls and hydraulic control requires maintenance and monitoring in perpetuity.

A low-permeability barrier wall would be effective at remediating groundwater COCs with concentrations greater than CULs.

9.2.6 Permeable Reactive Barrier Wall

Permeable reactive barrier (PRB) walls intercept and treat contaminated groundwater flowing from an upgradient source. Groundwater flows through a treatment wall of reactive material mixed with sand. Barrier walls are generally constructed in one of two configurations, either as a “funnel and gate” configuration that employs angled wing walls to capture and direct the contaminated groundwater to a central treatment unit, or as a linear trench intersecting the plume. Groundwater flows according to its natural gradient through the PRB, where the reactive media within the wall reacts with the dissolved chemicals in groundwater. The life span and effectiveness of a PRB wall is also dependent on the mass of chemicals passing through the wall. PRB walls do not remediate the source area itself but decrease the contaminant solubility or otherwise immobilize the chemicals migrating from the source area with the groundwater.

PRB walls would be effective at remediating arsenic and cVOC groundwater contamination at the Site.

9.2.7 Pump and Treat

Pump and treat involves pumping contaminated groundwater from the subsurface and treating it before it is discharged. Treatment is generally conducted by air stripping or filtration via activated carbon. Groundwater pump and treat can reduce chemical concentrations in saturated soil, but only slowly by increasing the diffusion of soil contamination into groundwater. Extraction system design and treatment are dependent on the site characteristics and chemical type. Extraction wells may be screened at different levels or intervals to maximize the system effectiveness; however, pump and treat systems often have long restoration time frames because pump and treat cannot significantly accelerate the removal of source mass.

The pump and treat technology would be effective at remediating arsenic and cVOCs in groundwater.

9.2.8 Thermal Treatment

Thermal treatment involves the use of heat to degrade, volatilize, or reduce contamination in soil or groundwater and is used in tandem with extraction and treatment methods like soil vapor extraction. Thermal treatment is performed either in situ or ex situ but is typically implemented in situ to avoid rehandling of contaminated media. In situ thermal remediation (ISTR) is typically used in contaminant source zones where high contaminant concentrations or free product are present. Where applicable, thermal treatment is generally very effective and can quickly reduce contaminant mass. ISTR is generally categorized into the following technologies:

- Electrical Resistance Heating (ERH): The subsurface is heated by electrical resistance. Electrodes installed into the ground at targeted depths deliver electricity into the subsurface where resistance is met, creating heat. Electrodes are typically spaced in a triangular pattern and contaminants are either extracted through the electrodes or nearby extraction well for treatment or storage at the surface. ERH requires the presence of groundwater or moisture, and the maximum temperature is limited to the boiling point of water (100 degrees Celsius). This limits this technology to the treatment of volatile chemicals.
- Thermal Conduction Heating (TCH): Uses simple heating through thermal conduction via heated metal pipes installed into the subsurface to mobilize or destroy contaminants. Like ERH, heated pipes are installed in a systematic triangular pattern and once mobilized, contaminants are extracted to the surface for treatment. The advantages of TCH are that it does not require water, can treat dry soils, and can reach temperatures to treat nonvolatile chemicals. However, TCH is generally less energy efficient and slower to heat than ERH.
- Steam Enhanced Extraction (SEE): Less common technology where surface-generated steam is injected into permeable subsurface through installed wells to mobilize contaminants. Vapors and liquids are extracted and treated at the surface. Like ERH, SEE is limited to treatment of volatile chemicals because temperatures do not exceed the boiling point of water. An advantage of SEE compared to other thermal technologies is that it can overcome cooling caused by groundwater flow.

Thermal treatment may be effective at remediating cVOCs in the source area. Thermal treatment would not be effective at remediating arsenic in groundwater or cVOCs in groundwater downgradient of the source area.

9.2.9 Soil Vapor Extraction

Soil vapor extraction (SVE) is a mechanical method of in situ remediation to remove volatile and some semi-volatile chemicals from soil within the vadose zone using vacuum pressure. Vacuum blowers at the surface induce gas flow through permeable soils and the soil vapor is collected in extraction wells, then discharged or treated at the surface. The effectiveness of SVE systems heavily depends on air flow and soil heterogeneity, where less permeable soils can take considerably more time to treat than permeable soils. SVE can reduce contaminants in groundwater but at a very slow rate, by transfer of contaminant mass from the liquid to the gas phase.

SVE may be effective at remediating cVOCs present in the vadose zone soils at the source property and cVOCs that volatilize from the shallow groundwater plume beneath the Ranch Drive-In and Speedy Glass properties.

9.2.10 Soil Excavation and Landfill Disposal

Excavation of contaminated soil using standard construction equipment is a common method to achieve remediation goals. For off-site disposal, excavated contaminated soil is transported by either truck or rail to an appropriate licensed landfill. The extent of soil removal is defined by remedial design sampling or confirmation soil sampling of the excavated surface prior to backfill, compaction, and site restoration. Selection of backfill material and site restoration is dependent on site-specific considerations and is typically designed to meet future use of the site. In some circumstances, backfilled material may act as a capped surface if contamination remains deeper than the bottom depth of the excavation. Excavation may require relocation of mobile structures or shoring to maintain sidewall stability. Dewatering or drawdown of the groundwater table may also be required if excavation is to occur below the groundwater table. Excavation depths will vary depending on the depth of contamination, presence of subsurface utilities, and site use.

Soil excavation may be effective at remediating cVOCs in soil at the source property.

9.3 PRELIMINARY SCREENING OF REMEDIAL TECHNOLOGIES

A preliminary screening of the remedial technologies listed in Sections 9.1 and 9.2 was completed in accordance with WAC 173-340-350(8)(b). The objective of the screening was to remove technologies from further evaluation if they clearly did not meet the minimum requirements of the RAOs or had a disproportionate cost to apply based on the site conditions. The preliminary screening process retains or rejects technologies based on the applicability at the Site given the following:

- The COCs and impacted media
- Effectiveness based on proven success at similar sites
- Applicability of the technology within the Site physical constraints
- The ability of the technology to achieve RAOs

Table 9.1 provides a summary of the technology evaluation relative to these criteria and indicates if the technology was retained or rejected as a result of the screening process.

Based on this preliminary screening step, the following technologies were rejected from further evaluation for remediation of soil or groundwater:

- No action
- Air sparging
- Chemical oxidation

- Low-permeability barrier wall
- Permeable reactive barrier wall
- Pump and treat
- Thermal treatment
- Soil vapor extraction

The remaining technologies were retained for further consideration as part of the cleanup action alternative evaluation in one or more AOCs:

- ICs
- Engineering controls
- Monitored Natural Attenuation
- Surface capping
- In situ groundwater treatment by bioremediation
- In situ groundwater treatment by activated carbon
- Soil excavation and landfill disposal

These technologies may be implemented as stand-alone treatments or in combination with other technologies, as appropriate, depending on subsurface conditions. These retained technologies were evaluated for each AOC and then aggregated into Site-wide alternatives for further evaluation, as described in Section 10.0.

10.0 Identification of Cleanup Action Alternatives

The retained technologies identified in Section 9.3 have been aggregated into cleanup action alternatives for soil and groundwater contamination at the Site, as described in the following sections. The alternatives will be evaluated according to the MTCA DCA procedures to compare the costs and benefits of the cleanup alternatives and identify the alternative that is permanent to the maximum extent practicable.

The four alternatives summarized in the following sections include a range of potential cleanup alternatives for each of the AOCs, ranging from most protective to least protective, and they employ combinations of active remedial technologies and passive technologies that either eliminate or manage current and potential future exposure to contaminated media at the Site. The estimated restoration time frames for each alternative include the time anticipated for construction of the cleanup action and subsequent groundwater monitoring until CULs are met for cVOCs.

10.1 ALTERNATIVE 1

Alternative 1 is the most protective alternative. Alternative 1 is shown on Figure 10.1 and includes the following elements:

Soil Excavation with Off-site Disposal: Shallow PCE contamination greater than proposed CULs in the Source Property cVOC AOC would be excavated to a maximum depth of approximately 9 feet bgs. In addition, soil with PCE concentrations greater than proposed CULs within the Bothell Way NE right-of-way within the Shallow Groundwater cVOC AOC would also be excavated to an expected depth of 8 feet bgs. Approximately 814 cubic yards (CY) of PCE-impacted soil would be removed and disposed of off-site at a Subtitle D landfill under a contained-in determination. It is assumed that limited shoring (trench boxes) would be necessary for the excavations deeper than 4 feet bgs and that excavation dewatering would not be necessary. This element includes contingency excavation of the shallow (5 feet bgs) PCE-contaminated soil area interpolated from older soil sampling data on the source property and the limited area of contaminated soil in the ROW; additional data may be collected during design to replace the older results in these areas and to characterize current conditions.

In Situ Groundwater Treatment: The PCE and vinyl chloride plume would be treated through high density injections of a colloidal liquid carbon biomatrix and sulfidated MZVI mixture (PlumeStop and sulfidated micro zero-valent iron [S-MZVI]) across the entire length and width of the cVOC plume to create passive treatment barriers in each cVOC AOC for chemical reduction and bioremediation in both shallow and deep groundwater. PlumeStop creates an in situ flow-through passive treatment zone that allows sorption of dissolved-phase contaminants to the carbon, which is expected to result in a relatively rapid reduction of PCE concentrations in the groundwater plume. The addition of S-MZVI destroys cVOCs through chemical reduction and biodegradation and limits the production of PCE breakdown products (i.e., TCE, *cis*- and *trans*-1,2-DCE, and vinyl chloride) that are typically created as part of the ERD process. The PlumeStop and S-MZVI mixture would be injected as follows:

- The PlumeStop and S-MZVI mixture would be injected under low-pressure into the subsurface using direct push drilling methods.
- The Source Property cVOC AOC treatment zone would be aggressively targeted with multiple rows of injections in the area where PCE concentrations in shallow groundwater are greatest.
- Six additional injection rows (barriers) would be oriented east to west along the length of the plume and spaced approximately every 50 to 100 feet. Barrier rows would be perpendicular to the length of the plume starting immediately south of the source property and terminating at a row approximately 10 feet north of UCCMW-34D.
  - Three barriers would be injected into the Shallow Groundwater cVOC AOC.
  - One barrier would be installed as a transition from the shallow to the deep and would span both the Shallow Groundwater cVOC AOC and the Deep Groundwater cVOC AOC.
  - Two barriers would be installed in the Deep Groundwater cVOC AOC. These downgradient treatment zones will act as a barrier to prevent further migration and target the deep portions of the aquifer beyond approximately 25 feet bgs.
- Injection spacing would be approximately 6 feet between each injection point.
- Arsenic in groundwater is assumed to return to natural occurring background levels once geochemical parameters of the aquifer return to pretreatment conditions.

Concentrations of cVOCs are expected to reduce rapidly in groundwater and the leaching pathway would be eliminated by excavating soils with PCE concentrations greater than proposed CULs.

Monitored Natural Attenuation (MNA) and groundwater monitoring would be a component of this alternative, as described in Section 10.5. The predicted restoration time frame for this alternative to achieve groundwater CULs for cVOCs Site-wide is 4 to 5 years. The estimated cost for Alternative 1 is $2,100,000, as shown in Table D.1 of Appendix D. Detailed costs for Alternative 1 are presented in Table D.2.

10.2 ALTERNATIVE 2

Alternative 2 is the second-most protective alternative. Alternative 2 is shown on Figure 10.2 and includes the following elements:

Soil Excavation with Off-site Disposal: Shallow PCE contamination greater than proposed CULs in the Source Property cVOC AOC would be excavated to a maximum depth of approximately 9 feet bgs. Approximately 547 CY of PCE-impacted soil would be removed and disposed of off-site at a Subtitle D landfill under a contained-in determination. It is assumed that limited shoring (trench boxes) would be necessary for the excavation and that excavation dewatering would not be necessary. This element includes contingency excavation of the shallow (5 feet bgs) PCE-contaminated soil area interpolated from older soil sampling data; additional data may be collected during design to replace the older results and characterize current site conditions.

Excavation Amendment: After excavation of the PCE contaminated soil, which has been described previously, and prior to backfill, S-MZVI will be added to the bottom of the deepest source area excavation. The application of S-MZVI will facilitate destruction of cVOCs through chemical reaction and also stimulate anaerobic biological degradation by creating reducing conditions that are favorable for naturally occurring microbes already present at the Site to break down cVOCs. S-MZVI would be diluted in a 1:1 mix with water and sprayed or dumped into the bottom of the excavation. The excavator bucket can be used to mix the product into the bottom of the excavation. After application, the excavation would be backfilled with clean fill.

In Situ Groundwater Treatment: Similar to Alternative 1, groundwater would be treated through a series of PlumeStop and S-MZVI injections in more focused barriers placed across the cVOC plume to create passive treatment barriers in the portions of each AOC where cVOC concentrations are the greatest. The PlumeStop and S-MZVI mixture would be injected as follows:

- The PlumeStop and S-MZVI mixture would be injected under low pressure into the subsurface using direct push drilling methods.
- Five injection rows (barriers) would be oriented east to west along the length of the plume starting along the southern edge of the source property immediately downgradient of monitoring well UCCMW-18, which has the greatest PCE concentrations in groundwater Site-wide. Barrier rows would terminate at or just north of UCCMW-34D along the downgradient edge of the deep plume.
  - Two barriers would be injected into the Shallow Groundwater cVOC AOC.
  - One barrier would be installed to span both the Shallow Groundwater and Deep Groundwater cVOC AOCs just upgradient of BB-2. PCE concentrations in BB-2 are elevated relative to other non-source area wells at the Site.
  - Two barriers would be installed in the Deep Groundwater cVOC AOC. These downgradient treatment zones will act as a barrier to prevent further migration and target contamination in the aquifer deeper than approximately 25 feet bgs.
- Injection spacing would be approximately 6 feet between each injection point.
- Arsenic in groundwater is assumed to return to natural occurring background levels once geochemical parameters of the aquifer return to pretreatment conditions.

Concentrations of COCs are expected to reduce rapidly in groundwater and the leaching pathway would be eliminated by excavating soils with PCE concentrations greater than proposed CULs.

MNA and groundwater monitoring would be a component of this alternative, as described in Section 10.5. The predicted restoration time frame for this alternative to achieve groundwater CULs for cVOCs Site-wide is 6 to 8 years. It is expected that groundwater beneath the roadways would take longer to reach cVOC CULs than the City and private properties. The estimated cost for Alternative 2 is $1,600,000, as shown in Table D.1 of Appendix D. Detailed costs for Alternative 2 are presented in Table D.3.

10.3 ALTERNATIVE 3

Alternative 3 the third-most protective alternative. Alternative 3 is shown on Figure 10.3 and includes the following elements:

In Situ Groundwater Treatment: In situ groundwater treatment in this alternative includes enhanced reductive dechlorination through injection of an emulsified vegetable oil substrate (EOS) to serve as an electron donor in the biochemical reactions of naturally occurring microbes that degrade PCE and its breakdown products to ethanes and ethenes, which are not hazardous to environmental receptors. The injected substrate also includes the nutrients to stimulate the population growth of these microbes that use PCE and its breakdown products as food and energy sources. Additionally, a supplemental buffer agent would be mixed into the substrate to control pH required to stimulate biodegradation of PCE and its breakdown products. Because the success of contaminant mass removal relies on subsurface geochemical conditions and existing microbe populations, base-line groundwater sampling would be required prior to the implementation of EOS injections, and it is expected that bioaugmentation cultures (injection of biodegrading microbes) would be necessary along with the EOS and buffer substrate.

Treatment zones for the initial phase of injections would include the source property, a downgradient zone encompassing the southern portion of Speedy Glass property and Main Street, and a third treatment zone immediately south of the deep plume extent.

- The Source Property cVOC AOC zone treatment application would address the source mass and prevent further groundwater migration from the source property.
- The downgradient treatment zone mid-plume will focus injections on the relatively high groundwater concentrations of COCs surrounding well BB-2. Injections would target both the Shallow Groundwater cVOC AOC and the Deep Groundwater cVOC AOC.
- The third and final downgradient treatment zone would act as a barrier downgradient of the southern plume boundary and target Deep Groundwater cVOC AOC beyond approximately 25 feet bgs.
- Injections would be installed within the treatment zones via direct push borings and would be spaced at approximately 10 to 15 feet between injections within source property zone and at approximately 20 feet in the downgradient treatment zones. This spacing is subject to change during the design process depending on the local permeability within each treatment zone. Additional injections may be warranted to provide complete treatment.
- Arsenic in groundwater is assumed to return to natural background levels once geochemical parameters of the aquifer return to pretreatment conditions.

Degradation and effective reduction of cVOC concentrations is expected to begin approximately 90 days after injection of the EOS and buffer solution. MNA and groundwater monitoring would be a component of this alternative, as described in Section 10.5. The predicted restoration time frame for this alternative to achieve groundwater CULs for cVOCs Site-wide is 8 to 10 years. The estimated cost for Alternative 3 is $2,800,000, as shown in Table D.1 of Appendix D. Detailed costs for Alternative 3 are presented in Table D.4.

10.4 ALTERNATIVE 4

Alternative 4 is the least protective alternative. Alternative 4 is shown on Figure 10.4 and includes the following elements:

In situ Groundwater Treatment: Like Alternatives 1 and 2, groundwater would be treated with PlumeStop and S-MZVI injections, but in Alternative 4 only the Source Property cVOC AOC would be treated. The PlumeStop and S-MZVI mixture would be injected as follows.

- The PlumeStop and S-MZVI mixture would be injected under low pressure into the subsurface using direct push drilling methods.
- The Source Property cVOC AOC treatment zone would be aggressively targeted with multiple rows of injections in the likely source area where PCE concentrations in shallow groundwater are greatest.
- Injection spacing would be approximately 6 feet between each injection point.
- Natural attenuation processes would be relied upon for downgradient groundwater in both the Shallow Groundwater AOC and the Deep Groundwater cVOC AOC. These processes include dilution, dispersion, and sorption with limited degradation due to the persistent nature of cVOCs. Mass reduction via volatilization is also possible in shallow soil and groundwater but not expected in deep groundwater.
- Arsenic in groundwater is assumed to return to natural occurring background levels once geochemical parameters of the aquifer return to pretreatment conditions.

Degradation and reduction of cVOC concentrations to concentrations that meet CULs is expected to be slow. Groundwater monitoring would be a significant component of this alternative, as described in Section 10.5. The predicted restoration time frame for this alternative to achieve groundwater CULs for cVOCs Site-wide is a minimum of 15 years. The estimated cost for Alternative 4 is $1,500,000, as shown in Table D.1 of Appendix D. Detailed costs for Alternative 4 are presented in Table D.5.

10.5 MONITORED NATURAL ATTENUATION AND GROUNDWATER MONITORING

The technologies proposed for each alternative described will facilitate the recovery of groundwater contamination by either removing the source of contamination or by in situ treatment of groundwater or a combination of both. MNA for groundwater is a component of each alternative, and natural attenuation processes would be assumed for long-term groundwater recovery. Therefore, post-remedy groundwater monitoring would be part of each alternative after remedy implementation. Specific details for long-term groundwater monitoring will be included in a Groundwater Monitoring Plan (GMP) developed as part of a long-term compliance monitoring plan (LTCMP) for the Site (refer to Section 10.6). The GMP will describe required post-construction groundwater monitoring, including a detailed plan for monitoring well locations and frequency, and adaptive management to ensure the long-term protectiveness of the selected remedy.

10.6 INSTITUTIONAL CONTROLS

ICs are legal and administrative controls intended to restrict human activities such that exposure to contaminants can be prevented or reduced. ICs will be included for any selected remedy for the Site where contaminants are left in place exceeding the cleanup standards. Specific ICs for the Site may include restrictions on land use or resource use (e.g., to prohibit the use of groundwater within Site boundaries as drinking water), soil management requirements, vapor intrusion mitigation, and/or provisions for maintaining a cap as a barrier to subsurface soil contamination, if warranted.

All soil with PCE concentrations above CULs, including on the source property and in the Bothell Way NE ROW, is currently covered with pavement. This pavement acts as a barrier to prevent human exposure to soil with PCE contamination, and limits the potential for infiltration, which reduces the potential for soil contamination to leach into groundwater. The City will retain ownership of the ROWs in perpetuity and pavement would therefore be maintained along all existing roadways and ROWs. It is anticipated that the source property will remain paved or otherwise covered with impermeable surfaces. However, ICs to manage disturbance of contaminated soil would be required for any soil contamination left in place that exceeds CULs at the source property. If additional soil sampling undertaken during remedial design indicates that any of areas of soil contamination have attenuated to concentrations less than CULs since they were initially characterized, then ICs for these areas would no longer be required.

Additionally, ICs that require the evaluation and mitigation of vapor intrusion into any future building built within 30 feet of groundwater contamination exceeding cVOC CULs in the shallow aquifer zone would be applied if groundwater does not attenuate to less than the VI screening levels or if future land use of the current commercial properties becomes residential. A LTCMP would additionally be developed for the Site during engineering design to address contamination that exceeds CULs post-remediation. The LTCMP would contain requirements for groundwater monitoring as well as details for routine inspection and maintenance of remedial elements (such as pavement, building subgrade, and monitoring wells). Lastly, contingency actions, as described in Section 12.3, would also be included in the LTCMP should conditions or site use change in the future.

11.0 Alternatives Evaluation and Disproportionate Cost Analysis

In this section, the cleanup action alternatives developed for the Site in Section 10.0 are evaluated against the MTCA requirements for a cleanup action per WAC 173-340-360.

11.1 CLEANUP ACTION ALTERNATIVE EVALUATION

This section provides a summary of the requirements that each cleanup action alternative is evaluated against in accordance with MTCA per WAC 173-340-360(2). Each of the proposed alternatives is screened relative to mandatory "MTCA Threshold Requirements" and "Other MTCA Requirements" for evaluation. In Section 11.2, a DCA was conducted to identify the alternative that is "permanent to the maximum extent practicable," using DCA evaluation criteria specified in WAC 173-340-360(3)(e). The Preferred Cleanup Action Alternative will be identified using this evaluation framework for recommendation to Ecology, as described in Section 12.0.

11.1.1 Model Toxics Control Act Threshold Requirements

MTCA WAC 173-340-360(2) states that all cleanup actions will meet the minimum requirements for a cleanup action. When multiple cleanup action components are implemented for a single site, the overall cleanup action shall also meet the Threshold Requirements in WAC 173-340-360(2)(a), which are discussed as follows:

- **Protect Human Health and the Environment.** Protection of human health and the environment shall be achieved through implementation of the selected cleanup action.
- **Comply with Cleanup Standards.** Cleanup standards, as defined by MTCA, consist of CULs for hazardous substances present at a site, combined with the location (or point of compliance) where the CULs must be met. All selected cleanup alternatives must meet cleanup standards defined for the Site.
- **Comply with Applicable State and Federal Laws.** WAC 173-340-710 states that cleanup standards shall comply with legally applicable requirements (ARARs). Section 12.5 identifies the ARARs for the preferred alternative for this Site.
- **Provide for Compliance Monitoring.** MTCA requires that all selected cleanup alternatives provide for compliance monitoring as described in WAC 173-340-410. Compliance monitoring consists of protection monitoring, performance monitoring, and confirmation monitoring. These are described as follows:
    - Protection monitoring is performed during remedial implementation to monitor short-term risks and confirm protection of human health and the environment during cleanup action construction activities.
    - Performance monitoring assesses short-term remedy effectiveness and confirms compliance with the site CULs immediately following cleanup action implementation.
    - Confirmation monitoring evaluates long-term effectiveness of the cleanup action following attainment of the cleanup standards.

Cleanup alternatives that meet the Threshold Requirements must also fulfill Other MTCA Requirements described in WAC 173-340-360(2)(b):

- **Use Permanent Solutions to the Maximum Extent Practicable.** The use of permanent solutions to the maximum extent practicable for a cleanup action is analyzed according to the DCA procedure described in WAC 173-340-360(3). Preference is given to alternatives that implement permanent solutions, defined in MTCA as actions that can meet cleanup standards "without further action being required at the site being cleaned up or any other site involved with the cleanup action, other than the approved disposal of any residue from the treatment of hazardous substances (WAC 173-340-200)."

  The DCA process is conducted to identify the alternative that uses permanent solutions to the maximum extent practicable.

- **Provide for a Reasonable Restoration Time Frame.** Restoration time frame is defined in MTCA as "the period of time needed to achieve the required CULs at the points of compliance established for the site." A cleanup action shall provide for a reasonable restoration time frame. The factors to be considered when determining the reasonable restoration time frame are listed in WAC 173-340-360(4)(b) and include, but are not limited to:
  - the potential risks posed by the site,
  - the practicability of achieving a shorter restoration time frame, and
  - the current and expected future use of the site.

- **Consideration of Public Concerns.** Public involvement must be initiated according to the requirements set forth in WAC 173-340-600. Public concerns are considered at each step in the formal cleanup process under MTCA. Ecology's decision on alternative selection will be presented for public comment in the draft Cleanup Action Plan.

11.1.2 Evaluation of Threshold Requirements

All four of the proposed alternatives meet the MTCA Threshold Requirements, and is described as follows:

- **Protect Human Health and the Environment.** The alternatives proposed provide varying degrees of protection of human health and the environment through methods of contaminated mass removal (e.g., excavation), or in situ groundwater treatment.

- **Comply with Cleanup Standards.** The alternatives proposed are all capable of achieving the proposed CULs. Groundwater CULs are anticipated to be met by all alternatives over their respective predicted restoration time frames, with Alternative 1 having the shortest restoration time frame and Alternative 4 having the longest restoration time frame.

- **Comply with Applicable State and Federal Laws.** All alternatives address and comply with all relevant and applicable state and federal laws relevant to this project, as described in Section 12.5.
- **Provide for Compliance Monitoring.** All alternatives would include compliance monitoring per WAC 173-340-410. For any alternative selected as the preferred remedy, a GMP would be prepared as part of the LTCMP and would include long-term groundwater monitoring to be conducted following completion of cleanup activities to evaluate compliance with proposed CULs.

11.1.3 Evaluation of Other Requirements

A description of how the four alternatives meet the MTCA Threshold Requirements is presented as follows:

- **Use Permanent Solutions to the Maximum Extent Practicable.** The DCA, which is presented in Section 11.2, is used to select the alternative that uses permanent solutions to the maximum extent practicable.
- **Provide for a Reasonable Restoration Time Frame.** Site-specific groundwater conditions may be taken into consideration under WAC 173-340-360(4)(b) when considering the definition of a reasonable restoration time frame and whether it is practicable to achieve a shorter restoration time frame. The primary concern for restoration time frame is PCE and its breakdown products, as the normal geochemical conditions at the Site are expected to be present within 1 to 2 years of achieving CULs for cVOCs resulting in arsenic returning to background concentrations during the same time frame for all alternatives. PCE is present in groundwater at concentrations more than 20 times the proposed CUL in the source area and is generally between 2 and 5 times the proposed CUL throughout the rest of the plume. The shallow and deep groundwater plumes span multiple blocks and contain a fair amount of dissolved-phase mass. Therefore, due to the size of the plumes, it is not considered practicable to achieve a restoration time frame shorter than 5 years. Because all the alternatives include varying degrees of in situ groundwater treatment, the predicted restoration time frames for groundwater longer than 5 years are all reasonable at the Site. The predicted restoration time frame for groundwater to meet proposed cleanup standards for cVOCs for each Alternative is as follows:
  - Alternative 1: 4 to 5 years
  - Alternative 2: 6 to 8 years
  - Alternative 3: 8 to 10 years
  - Alternative 4: More than 30 years
- **Consideration of Public Concerns.** Public concerns are addressed by the Ecology-led public comment process as well as the DCA.

11.2 DISPROPORTIONATE COST ANALYSIS

The MTCA DCA procedure is used to evaluate whether a cleanup action uses permanent solutions to the maximum extent practicable as determined by the level of attainment of specific criteria defined in WAC 173-340-360(3)(f). The environmental benefits of each alternative are scored using seven evaluation criteria. Additionally, the cost of each alternative is estimated.

As stated in MTCA, the cost of an individual alternative is determined disproportionate "if the incremental costs of the alternative over that of a lower cost alternative exceed the incremental degree of benefits achieved by the alternative over that of the other lower cost alternative" (WAC 173-340-360(3)(e)(i)).

Evaluation of disproportionate cost allows comparison of each alternative to the most permanent alternative presented (i.e., Alternative 1), as determined by attainment of MTCA criteria. This analysis can be qualitative or quantitative. If multiple alternatives possess equivalent benefits, the lower-cost alternative will be selected. The seven DCA criteria defined in MTCA (WAC 173-340-360(f)) are summarized as follows:

- **Protectiveness.** Overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, the time required to reduce these risks, and the overall improvement in environmental quality.
- **Permanence.** The degree to which the alternative permanently reduces the toxicity, mobility, or volume of hazardous substances.
- **Cost.** The cost to implement the alternative consists of construction, net present value of any long-term costs, and agency oversight costs that are recoverable.
- **Effectiveness over the long term.** Long-term effectiveness consists of the degree of certainty that the alternative will be successful, the reliability of the alternative during the time when hazardous substances are expected to remain on-site at concentrations greater than CULs, the magnitude of the residual risk with the alternatives in place, and the effectiveness of controls in place to control risk while contaminants remain on-site.
- **Management of short-term risks.** Short-term risks comprise the risk to human health and the environment associated with the alternative during construction and implementation and the effectiveness of measures taken to control those risks.
- **Technical and administrative implementability.** The ability of the alternative to be implemented is based on whether the alternative is technically possible and meets administrative and regulatory requirements, and if all necessary services, supplies, and facilities are readily available.
- **Consideration of public concerns.** These considerations take into account whether the community has concerns regarding the alternative and if so, to what extent the alternative addresses those concerns.

As part of the DCA conducted in this FS, each alternative was ranked and assigned a numerical score for each DCA criterion on a scale of 1 to 10, where a score of 10 represents the highest benefit and a score of 1 represents the lowest benefit. Each numerical score was then multiplied by a weighting value, and the scores were summed to determine the total alternative benefit score. The weighting values used in this FS are as follows:

- Protectiveness: 30%
- Permanence: 20%
- Effectiveness over the long-term: 20%
- Management of short-term risks: 10%
- Technical and administrative implementability: 10%
- Consideration of public concerns: 10%

The alternatives are evaluated relative to their ability to comply with the criteria listed and are compared to both each other and the criteria. Because some alternatives provide a similar degree of compliance with a given criterion, the associated evaluation statements may be the same or similar. A summary of the scoring for each criterion, including the estimated costs for each alternative, are summarized in Table 11.1. The following sections provide a summary of each of the DCA criteria and discuss the rationale for each alternative's score in relation to the other alternatives. A full description of all aspects evaluated under each criterion for the alternatives is included in Table 11.2.

11.2.1 Protectiveness

Protectiveness was evaluated based on the degree to which existing risks were reduced, time required to reduce risks and attain cleanup standards, risks resulting from alternative implementation, and improvement in overall environmental quality. Factors contributing to each alternative's score are summarized as follows.

- Alternative 1 is considered the most protective remedy because it would remove the most soil contamination with concentrations greater than CULs from the Site, has the most robust in situ groundwater treatment and the shortest restoration time frame for groundwater (4 to 5 years), and the highest overall improvement in environmental quality. Alternative 1 scored a 10.
- Alternative 2 includes the second-greatest volume of soil removal and includes a more focused in situ groundwater treatment. Alternative 2 scored a 9.
- Alternative 3 does not include soil removal but includes a rather robust in situ groundwater treatment injection with a longer restoration time frame than Alternatives 1 and 2. Alternative 3 scored an 8.
- Alternative 4 scored a 2 because it (a) does not include contaminated soil removal, only targets the Source Area cVOC AOC for in situ groundwater treatment with a heavy focus on MNA, and (b) has a much longer restoration time frame than the other alternatives.

11.2.2 Permanence

Permanence was evaluated based on the degree of reduction of contaminant toxicity, mobility, volume, adequacy of destruction of hazardous substances, reduction or elimination of release sources, degree of irreversibility, and risk of treatment residuals. Factors contributing to each alternative's score are summarized as follows.

- Alternative 1 scored the highest at a 10 because it removes all accessible soil with cVOCs that exceed CULs and proposes the most aggressive in situ groundwater treatment that relies on adsorption and degradation of contaminants.
- Alternative 2 scored an 8 because the alternative removes all accessible soil that is at risk of leaching contaminants to groundwater and proposes focused in situ groundwater treatment that relies on adsorption and degradation of contaminants but is more limited in scope than Alternative 1.
- Alternative 3 scored a 7 because it leaves soil contamination in place and groundwater treatment relies on degradation of contaminants only, which is less certain than adsorption and degradation.
- Alternative 4 is the least permanent solution and scored a 2.

11.2.3 Effectiveness Over the Long-Term

Long-term effectiveness was evaluated based on the degree of certainty of success, reliability while contaminants remain on-site, magnitude of residual risk, and effectiveness of controls to manage residual risk. Factors contributing to each alternative's score are summarized as follows.

- Alternative 1 scored a 10 because it would remove all soil contamination from the Site and has plume-wide in situ groundwater treatment. Therefore, it has the highest certainty of success to achieve soil and groundwater CULs and the lowest chance of incomplete degradation or rebound of cVOC concentrations.
- Alternative 2 scored a 9 because it leaves contaminated soil in place (beneath the road) and employs in situ groundwater treatment that is focused on areas of the plume with elevated concentrations of PCE in groundwater.
- Alternative 3 scored a 7 because although in situ groundwater treatment is plume-wide, the treatment focuses on degradation, which is less certain than the treatment proposed in Alternatives 1 and 2. Alternative 3 also leaves soil contamination in place.
- Alternative 4 relies mostly on MNA and would be least effective in plume-wide cleanup and is scored a 2.

11.2.4 Management of Short-Term Risks

Short-term risk management was evaluated based on the risk to human health and the environment created by implementing the remedy and the effectiveness of controls to manage the short-term risk. Factors contributing to each alternative's score are summarized as follows.

- Alternative 1 scored a 3 because it includes the largest scope of contaminated material removal, will require shoring or sloping to maintain excavation stabilization, and includes a significant number of injections, including in the roadways.
- Alternative 2 scored a 7 because it includes less excavation and less injections than Alternative 1, including less work in the roadway.
- Alternative 3 scored a 5 because although it does not include excavation, it includes the greatest number of injections and the most work in the roadways.
- Alternative 4 scored a 9 as it is the least invasive alternative that does not include excavation, only includes a small number of injections in the Source Property cVOC AOC and has the lowest potential for worker or public contact with contaminated media. It includes the most amount of groundwater sampling, which involves some sample collection in the roadways.

11.2.5 Technical and Administrative Implementability

Technical and administrative feasibility were evaluated based on technical possibility; availability of facilities, services, and material; administrative and regulatory requirements; project scale and complexity; monitoring requirements; access requirements; and integration with existing and future operations. Factors contributing to each alternative's score are summarized as follows.

- Alternatives 1 and 3 scored the lowest at 4 as they both include significant disruption to private properties and in active roadways, which will involve access, disruption of private businesses, and road closure coordination. Alternative 1 includes the most work on private businesses, whereas Alternative 3 includes the most work in roadways.
- Alternative 2 scored a 7, because it includes fewer injections on private properties and in the roadways and is less disruptive than Alternatives 1 and 3.
- Alternative 4 only involves off-property access in in-road work during groundwater sample collection, which is much less disruptive than injections in Alternatives 1 through 3. This work would not impact traffic or private businesses and is thus scored higher at 9.

11.2.6 Considerations of Public Concerns

Public concerns will be reviewed following the public comment period and will be addressed as part of the final remedial alternative selection and design. All alternatives scored a 7 pending public comment; however, it is anticipated that the public perception will not be the same for each alternative. Factors that could contribute to different public perception of the alternatives are summarized as follows.

- Impacts to the community during implementation of Alternatives 1 and 3 would be similar and most intensive and would require the use of a drill rig and support vehicles for a small crew. Public parking spaces and lanes of traffic would require temporary closure during injections. It is anticipated that the public may express concerns about the impact to local businesses and local traffic during injection activities and therefore these alternatives would likely receive low scores.
- Alternative 2 would require similar equipment but would be less disruptive to local businesses and traffic and is anticipated to be scored higher than Alternatives 1 and 3.
- Alternative 4 would not disrupt off-property businesses and would have minimal impact on traffic but would also have the longest restoration time frame, which may be of concern to some private business owners and members of the public. It is anticipated to score the lowest.

11.2.7 Cost

Costs were estimated for each alternative and include costs for construction, long-term operations, maintenance, and monitoring; permitting; and agency oversight. In addition, all costs include sales tax, and a 25% design contingency. Estimated costs for each alternative are summarized in Table 11.1 and presented in detail in Appendix D. The costs for each alternative are as follows:

- Alternative 1: $2,100,000
- Alternative 2: $1,600,000
- Alternative 3: $2,800,000
- Alternative 4: $1,500,000

11.3 SELECTION OF PREFERRED CLEANUP ACTION ALTERNATIVE

The preferred cleanup action was selected by choosing the alternative with the greatest benefit per unit cost score. This score is calculated by dividing the total weighted benefit score by the estimated alternative cost (standardized by dividing by $1 million) for that alternative. Total benefits per unit cost scores are presented in Table 11.2. Based on the alternatives evaluation presented in the previous sections and in Tables 11.1 and 11.2, the total benefit per unit cost achieved are as follows:

- Alternative 1: 6.00
- Alternative 2: 7.83
- Alternative 3: 3.66
- Alternative 4: 3.91

These results indicate Alternative 2 as the option that is permanent to the maximum extent practicable and, therefore, is selected as the Preferred Cleanup Action Alternative. Section 12.0 describes the Preferred Cleanup Action Alternative in greater detail.

12.0 Recommendation for the Preferred Alternative

The Preferred Alternative for the remediation of soil and groundwater at the Site, which is proposed by the City to Ecology for selection and implementation at the Site, is described in Section 12.1. Sections 12.4, 12.5, and 12.6 describe how the Preferred Alternative complies with MTCA, ARARs, and Site RAOs, respectively. The Preferred Alternative has the lowest cost per degree of benefit and provides the greatest level of environmental benefit and permanence per dollar spent, making it the most permanent remedy to the maximum extent practicable.

12.1 DESCRIPTION OF PREFERRED ALTERNATIVE

Alternative 2, which provides the greatest degree of benefit for the associated cost out of all the alternatives discussed in Section 11.0, is selected as the Preferred Alternative for the Site, and is shown on Figure 10.2. This remedy includes the following components:

- Excavation and off-site disposal of soil in the Source Area cVOC AOC with COC concentrations greater than the CULs.
- In situ groundwater treatment by injecting a trademarked colloidal liquid carbon biomatrix (Plume Stop) and S-MZVI mixture in focused areas in all cVOC AOCs to immobilize and degrade contaminants.
    - Placement of S-MZVI into the bottom of the 9-foot excavation on the Source Property cVOC AOC.
    - Injection of Plume Stop and S-MZVI mixture in all three cVOC AOCs to create five passive treatment barriers for chemical reduction and bioremediation in both shallow and deep groundwater.
- MNA for groundwater recovery.
- Groundwater monitoring to determine compliance with Site cleanup standards.
- A ROW contamination protocol, implemented as an institutional control, if necessary, to address remaining soil contamination in the City-owned ROW.

Together, the individual technologies remove contaminant mass soil through excavation and in groundwater through adsorption and degradation. The Preferred Alternative is a comprehensive final remedy for the Site that is compliant with all the applicable remedy selection requirements under MTCA. This alternative provides the greatest environmental benefit for the associated cost based on the DCA presented in Section 11.0 and Tables 11.1 and 11.2.

12.1.1 Soil Excavation and Off-Site Disposal

Contaminated soil will be removed from three distinct areas on the Source Property cVOC AOC, as shown on Figure 10.2, using standard excavation means and methods. Excavated soil will be transported off-site to a permitted Subtitle D landfill for disposal. Excavated areas will be backfilled with clean imported fill and restored with an asphalt or gravel surface. Removal of contaminated soil that exceeds Site CULs will eliminate potential ongoing sources of contamination to groundwater via leaching.

Specific details regarding excavation in each of the three areas is described as follows. Actual excavation limits may differ from the depths or lateral dimensions specified to remove soils with COC concentrations greater than applicable CULs, as determined by future remedial design sampling. It should be noted that, for cost estimating purposes, a 20% allowance for sloughing and over-excavation was added to the calculated contaminated soil volume.

- The 5.5-foot excavation in the northwest portion of the Source Property cVOC AOC is designed to remove PCE in shallow vadose zone soil that is greater than the CUL. Approximately 137 CY of soil will be removed in total. Dewatering and shoring are not anticipated to be necessary to complete the excavation.
- The 5-foot excavation in the eastern portion of the Source Property cVOC AOC is designed to remove PCE in shallow vadose zone soil greater than the CUL. Approximately 34 CY of soil will be removed in total. Dewatering and shoring are not anticipated to be necessary to complete the excavation. Given the age of the single sample result used to interpolate the extent of this excavation area, the presumed maximum excavation extent is included as a contingency and additional data collected for design purposes may be collected to replace the older data and to define the necessary extent of the excavation to remove contaminated soil.
- The 9-foot excavation in the south-central portion of the Source Property cVOC AOC is designed to remove PCE in vadose zone and saturated zone soil greater than the CUL. It is assumed that contaminated soil in this area is intermittently in contact with groundwater. Approximately 376 CY of soil will be removed in total. Dewatering is not anticipated to be necessary to complete the excavation, but shoring or sloped sidewalls will be necessary.

12.1.2 In Situ Groundwater Treatment

S-MZVI will be placed in the bottom of the 9-foot excavation and, prior to backfill, mixed with an excavator with clean material to stimulate biodegradation in the Source Property cVOC AOC.

In situ groundwater treatment will also be conducted throughout the groundwater plume to address cVOCs (specifically, PCE and vinyl chloride) at concentrations that are greater than their respective CULs. A proprietary mixture of liquid-activated carbon, such as PlumeStop and S-MZVI, will be injected under low pressure into the subsurface using a direct push drill rig to provide even distribution within the target groundwater treatment zones. The target treatment zone is expected to be 10 to 20 feet bgs in shallow groundwater (barriers 1 and 2), 15 to 25 feet bgs in the shallow to deep transition zone (barrier 3), and 25 to 35 feet bgs in deep groundwater (barriers 4 and 5). The colloidal matrix will coat soil particles to increase the adsorption of groundwater contaminants and act as a passive treatment zone to immobilize contaminants and passively treat groundwater as it flows downgradient.

12.1.3 Groundwater Monitoring

MNA for groundwater is a component of the Preferred Alternative after the removal of the soil source contamination. As part of MNA, post-remedy groundwater monitoring throughout the plume and downgradient of in situ groundwater treatment barriers will be required after cleanup action implementation. The GMP will describe long-term post-construction groundwater monitoring, including specific monitoring locations and frequency, and adaptive management to ensure the long-term protectiveness of the Preferred Alternative. Groundwater compliance will be determined based on a comparison of groundwater data to Site CULs.

12.1.4 Institutional Controls

An IC would typically be required to address remaining cVOC-contaminated soil exceeding the CUL. Because the remaining contamination will be beneath pavement in the Bothell Way NE ROW, and the cVOC concentrations do not exceed screening levels for worker protection in this area, the IC would primarily address limiting infiltration and disposition of contaminated environmental media during any future ROW work. This IC would be required based on existing soil data and may not be required if data collected for remedial design or as part of implementation of the cleanup action demonstrate that current soil conditions do not exceed CULs.

The City is expected to own the ROW and maintain the pavement in perpetuity, addressing future infiltration. Future ROW work would be addressed with the administrative controls in a ROW contamination protocol, which is incorporated into the City parcel mapping system and triggered by applications for ROW work permits. The ROW contamination protocol identifies requirements for design review and City consultation prior to construction, material handling, material disposal, record-keeping, and worker safety.

ICs would not be required for vapor intrusion with implementation of the Preferred Alternative. However, shallow groundwater contamination beneath the southern parcel of the source property and Speedy Glass and Ranch Drive-In properties currently exceeds the vapor intrusion SLs for unrestricted land use. ICs may be triggered by a change of land use on these properties. The City may address this contingency with a parcel restriction overlay for future development permit applications if such development is anticipated prior to compliance with cleanup standards on these properties. The parcel restriction overlay would require that any development of an enclosed structure designed for residential use either (a) conduct additional vapor intrusion assessment in accordance with the most current Ecology guidance at the time of assessment or (b) install presumptive vapor intrusion mitigation measures.

12.2 COMPLIANCE MONITORING REQUIREMENTS

Compliance monitoring to ensure the protectiveness of the Preferred Cleanup Action Alternative will be implemented in accordance with WAC 173-340-410, Compliance Monitoring Requirements. Detailed monitoring elements for construction will be described in a Construction Compliance Monitoring Plan (CCMP), which will be prepared as part of remedial design. The

CCMP will include a Health and Safety Plan (HASP), Sampling and Analysis Plan, and Quality Assurance Project Plan for monitoring and sample collection during cleanup action implementation. The CCMP will be included as an appendix to the Engineering Design Report, which will describe the approach and criteria for the engineering design of soil and groundwater cleanup actions at the Site. A post-remedy LTCMP will describe required long-term operations, maintenance, and monitoring after remedy implementation to ensure the long-term protectiveness of the remedy and will include a GMP and an updated HASP.

The purpose of the three types of compliance monitoring identified in WAC 173-340-410, with respect to how they will be implemented as part of the proposed alternative, is described as follows.

- **Protection monitoring** is used to confirm that human health and the environment are adequately protected during construction of the cleanup action and post-construction monitoring. Protection monitoring requirements will be described in Site-specific HASPs that address worker activities during remedy construction and post-construction monitoring.
- **Performance monitoring** is used to confirm that the cleanup action has attained cleanup standards and other performance standards. Performance monitoring will be conducted to document that remedial goals are being achieved, including cVOC reduction in groundwater after PlumeStop and S-MZVI injections. The combined liquid activated carbon and S-MZVI injections throughout the plume are designed to address groundwater contamination through adsorption, dechlorination, and degradation of PCE and its breakdown products.
- **Confirmation monitoring** is used to confirm the long-term effectiveness of the cleanup action after completion of the preferred cleanup action. Confirmation samples would be collected along the sidewalls and bottom of the excavation to confirm that PCE concentrations in soil comply with the cleanup standards. Confirmation groundwater monitoring would be conducted following results from performance monitoring that verify that groundwater concentrations of cVOCs are less than CULs. Long-term monitoring of groundwater may be required to verify that the remedy remains effective. This is likely to be conducted through periodic reviews of the Site overseen by Ecology.

12.3 CONTINGENCY ACTIONS

Contingency actions may be considered if groundwater does not achieve CULs within the restoration time frame, or if changes in land use necessitate further action to control vapor intrusion prior to compliance with cleanup standards on certain parcels.

If groundwater does not achieve cVOC CULs within the restoration time frame, additional targeted in situ treatment may be considered to address remaining areas of groundwater contamination. If arsenic concentrations in groundwater remain elevated at concentrations greater than 2 times the CUL after cVOC concentrations have met the CULs in accordance with the GMP, additional monitoring of arsenic and geochemical parameters in groundwater at selected well locations may be considered to more closely evaluate the return to natural geochemical conditions at the Site.

The potential for vapor intrusion was evaluated in the RI relative to current commercial properties within 30 feet of shallow cVOC groundwater plumes (i.e., the Ranch Drive-In and Speedy Glass properties). Site CULs for cVOCs in groundwater are more stringent than vapor intrusion screening levels protective of residential land use, except for the CULs for TCE and *trans*-1,2-DCE (refer to Tables 5.1 and 5.7). TCE and *trans*-1,2-DCE are both intermediate breakdown products of PCE, which are formed prior to formation of vinyl chloride. The vinyl chloride CUL (0.20 µg/L) is less than the vapor intrusion SLs for either TCE or *trans*-1,2-DCE (1.5 µg/L and 70 µg/L, respectively). Therefore, when PCE breakdown is complete (i.e., when PCE and vinyl chloride concentrations meet their groundwater CULs after remediation), concentrations of all groundwater cVOCs are expected to meet vapor intrusion SLs protective of potential future residential land use. However, if groundwater CULs for PCE breakdown products are not achieved, additional contingency actions—such as vapor intrusion assessment or mitigation—may be necessitated by future changes in land use at properties within 30 feet of shallow groundwater cVOC plumes.

More detailed information regarding the triggers for contingency actions and scope of such actions would be presented in the LTCMP.

12.4 COMPLIANCE WITH THE MODEL TOXIC CONTROL ACT

The Preferred Alternative meets the minimum requirements for selection of a cleanup action under MTCA (WAC 173-340-360(2)(a)) because it is protective of human health and the environment, complies with cleanup standards, complies with applicable state and federal laws, and provides for compliance monitoring. The Preferred Alternative also meets other MTCA requirements (WAC 173-340-360(2)(b)) for selection of a cleanup action, including using permanent solutions to the maximum extent practicable, providing for a reasonable restoration time frame, and consideration of public concerns.

Exposure pathways will be addressed through contaminant removal and disposal in a landfill, in situ groundwater treatment, and MNA. ICs will be developed to manage contamination that would remain in place at concentrations greater than Site CULs.

12.5 COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Compliance with ARARs is a minimum requirement for cleanup actions. ARARs are often categorized as location-specific, action-specific, or chemical-specific, as follows, and are summarized in Tables 12.1, 12.2, and 12.3.

- **Location-specific ARARs** are requirements that are applicable to the specific area where the site is located and can restrict the performance of activities, including cleanup actions, solely because they occur in specific locations.

- **Action-specific ARARs** are requirements that are applicable to certain types of activities or technologies that are used during the implementation of cleanup actions. Waste disposal regulations are an example of an action-specific ARAR.
- **Chemical-specific ARARs** are applicable to the types of contaminants present at the site. The cleanup of contaminated media at the Site must meet the proposed CULs developed under MTCA; these CULs are considered chemical-specific ARARs.

Location-specific ARARs will be met through compliance with all applicable local, state, and federal regulations based on the physical location of the Site. Action-specific ARARs will be met through implementation of construction activities in compliance with all applicable construction-related requirements such as disposal for excavated soil and compliance with all applicable drilling-related requirements. Chemical-specific ARARs will be met through compliance with proposed CULs.

Implementation of the Preferred Cleanup Action Alternative would typically trigger a suite of environmental permits; however, cleanup actions conducted under a CD with Ecology are exempt from the state and local ARAR procedural requirements, such as permitting and approval requirements (WAC 173-340-710(9)(b)). Cleanup actions must, however, demonstrate compliance with the substantive requirements of those ARARs (WAC 173-340-710(9)(c)). This exemption applies to procedural permitting requirements under the Washington State Water Pollution Control Act, the Solid Waste Management Act, the Shoreline Management Act, and local laws requiring permitting such as City of Bothell municipal codes and regulations. Cleanup actions are not exempt from procedural requirements of federal ARARs.

12.6 COMPLIANCE WITH REMEDIAL ACTION OBJECTIVES

The Preferred Alternative achieves the RAOs through the following actions:

- Protection of human health and the environment from Site contamination that exceeds applicable CULs by removal of contaminated soil or management of exposure pathways for soil left in place and attenuation of cVOCs to CULs protective of drinking water and vapor intrusion.
- Prevention of migration of contaminants from the Site via groundwater transport by installation of in situ downgradient treatment barriers to treat shallow and deep groundwater contamination throughout the cVOC plume.
- Reduction of concentrations of COCs in soil that are potential sources of continuing groundwater contamination by removal of saturated source soils with cVOC contamination on the source property and application of treatment in the source area excavation.
- Remediation of contaminants to facilitate future Site development by removing contaminated soil that exceeds CULs and focusing aggressive groundwater treatment on downgradient commercial properties; and minimization of impacts to private

businesses during remedial construction by use of in situ treatment and placement of treatment barriers primarily on City-owned land.

- Proper management of contaminated soil or groundwater generated during Site cleanup by implementing construction protection monitoring.
- Compliance with ARARs as described in Section 12.5.
- Provision for compliance monitoring to evaluate the effectiveness of the preferred cleanup action and to determine that the cleanup standards are met by implementation of a GMP.

12.7 PROPERTY OWNERSHIP AND ACCESS

The City currently owns the ROWs within the Site; the source property; and Lot E, F, G. Remedial action construction on the City-owned properties is not subject to access constraints. The Preferred Alternative includes injection of in situ groundwater treatment barriers, when possible, on City property in order to limit construction impacts to private businesses.

Private businesses within the footprint of the Site include the Ranch Drive-In, Speedy Glass, and Baskin-Robbins. The City has previously obtained access agreements for private properties as necessary to conduct the field investigations for this RI/FS and prior environmental investigations, which detailed the property entry, notification, and reporting requirements for conducting work on those properties. The City will obtain additional access agreements or amend existing agreements as necessary to complete the remedial action construction and compliance monitoring.

12.8 TYPES AND AMOUNTS OF HAZARDOUS SUBSTANCES TO REMAIN IN PLACE

The hazardous substances that will remain in place after implementation of the Preferred Alternative include limited areas of PCE and TPH in soil.

PCE that will remain in soil includes one isolated area in the ROW near the intersection of NE 183rd Street and Bothell Way NE, approximately 90 feet southwest of the source property as discussed in Section 6.2.1. Contamination at this location was measured at concentrations of 0.12 to 0.15 mg/kg and is presumed to extend to approximately 8 feet bgs. It is well-bounded by other soil samples less than the CUL, encompassing an approximate area of 750 square feet or less (approximately 220 CY). The detected PCE in soil at this location was attributed to back-diffusion from highly PCE-contaminated groundwater and is expected to attenuate with ongoing groundwater treatment. Existing data in this location may be supplemented or replaced by data collected for remedial design or as part of implementation of the cleanup action to document current conditions. A ROW contamination protocol is proposed as an IC to address this remaining area of PCE contamination if data show that current PCE concentrations are greater than the CUL.

TPH detected at elevated concentrations relative to ecological SLs and MTCA Method A criteria in soil within the footprint of the Site is associated with other cleanup sites or the UST on

Speedy Glass. This TPH is not associated with releases from the Site. An IC is not proposed for these areas of soil contamination that are unrelated to the Site.

The extents of cVOC contamination in groundwater will be verified during remedial design to ensure that the selected remedy addresses all groundwater cVOC contamination. cVOC contamination in groundwater will be addressed with in situ treatment and is expected to achieve CULs. Arsenic is expected to achieve natural-background-based groundwater CULs after equilibration to natural geochemical conditions. Groundwater will achieve CULs throughout the standard point of compliance, which is Site-wide, therefore no groundwater contamination that exceeds CULs will remain in place after implementation of the Preferred Alternative.

12.9 RESTORATION TIME FRAME

The soil CUL for PCE is expected to be met following completion of soil excavation, which is expected to take approximately 1 to 2 weeks from the start of construction. ICs and a ROW contamination protocol would be implemented as necessary to manage future exposures where contamination will remain in place as described in Section 12.8. The restoration time frame for cVOCs in groundwater is expected to be 6 to 8 years after injections are complete. Site groundwater is expected to return to natural geochemical conditions, resulting in restoration of arsenic to natural background concentrations less than the CUL, within 1 to 2 years of achieving the CULs for cVOCs.

12.10 SUMMARY OF THE ESTIMATED REMEDY COSTS

Estimated remedial costs for the Preferred Alternative are presented in Appendix D. The costs associated with remedy implementation consist of capital construction costs, groundwater confirmation monitoring and reporting following remedy completion, and agency oversight that would include periodic reviews of the constructed remedy. The estimated costs for remedy construction are as follows:

- Construction capital costs that include sales tax, construction, and engineering oversight are estimated to be approximately $717,000.
- Construction indirect costs that include Agency oversight, engineering design/reporting, planning, and permitting costs associated with remedy implementation are estimated to be $275,000.
- Long-term groundwater monitoring costs were estimated based on semiannual monitoring for 4 years after remedy implementation, then quarterly monitoring for a period of 1 year. The groundwater monitoring costs, including well installation and decommissioning, were estimated to be $337,000.

The total project cost for the Preferred Cleanup Action Alternative, which includes a 25% contingency cost, is estimated to be $1,600,000.

13.0 References

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Ultra Custom Care
Cleaners Site

Remedial Investigation and Feasibility Study

Tables

FINAL

Table 2.1
Groundwater Elevations at Currently Existing Monitoring Wells

Well ID	Top of Casing Elevation (feet NAVD 88)	Date	Time of Water Level Measurement	Depth to Water (feet BTOC)	Water Elevation (feet NAVD 88)
BB-2	39.13	7/20/2020	12:48	4.80	34.33
BC-5	37.66	7/20/2020	10:02	7.92	29.74
BI-3	39.13	7/20/2020	11:30	2.45	36.68
BLMW-10	37.61	7/20/2020	10:12	5.69	31.92
INJ-1	45.70	7/20/2020	16:24	7.89	37.81
INJ-2	46.40	7/20/2020	16:22	8.64	37.76
INJ-4	47.37	7/20/2020	15:34	9.63	37.74
INJ-6	47.64	7/20/2020	15:17	9.83	37.81
INJ-7	45.61	7/20/2020	16:43	7.88	37.73
INJ-8	46.05	7/20/2020	16:27	8.31	37.74
INJ-9	46.40	7/20/2020	16:25	8.64	37.76
INJ-10	46.59	7/20/2020	15:42	8.84	37.75
INJ-11	46.75	7/20/2020	15:40	8.98	37.77
INJ-12	46.89	7/20/2020	15:38	9.12	37.77
INJ-13	47.39	7/20/2020	15:36	9.60	37.79
INJ-14	47.64	7/20/2020	15:32	9.72	37.92
INJ-15	47.53	7/20/2020	15:30	9.69	37.84
UCCMW-1	47.01	7/20/2020	17:03	9.30	37.71
UCCMW-2	47.14	7/20/2020	14:47	7.99	39.15
UCCMW-3R	47.84	7/20/2020	17:06	8.70	39.14
UCCMW-4D	46.11	7/20/2020	17:00	8.68	37.43
UCCMW-5	47.64	7/20/2020	13:12	10.34	37.30
UCCMW-6	41.91	7/20/2020	14:30	4.61	37.30
UCCMW-7	41.46	7/20/2020	15:30	5.23	36.23
UCCMW-8	38.98	7/20/2020	12:44	4.93	34.05
UCCMW-9	39.47	7/20/2020	11:34	4.34	35.13
UCCMW-10	39.36	7/20/2020	10:45	4.87	34.49
UCCMW-11S	46.97	7/20/2020	14:56	8.07	38.90
UCCMW-11D	47.08	7/20/2020	14:50	8.23	38.85
UCCMW-12S	47.76	7/20/2020	15:03	9.09	38.67
UCCMW-12D	47.72	7/20/2020	15:00	9.05	38.67
UCCMW-13S	47.62	7/20/2020	15:10	8.98	38.64
UCCMW-15	47.27	7/20/2020	15:14	9.17	38.10
UCCMW-16	45.07	NA	NA	NM	NA
UCCMW-17	46.68	7/20/2020	16:41	8.86	37.82
UCCMW-18	46.56	7/20/2020	16:30	8.93	37.63
UCCMW-19	46.09	7/20/2020	16:54	8.46	37.63
UCCMW-20	45.52	7/20/2020	11:21	8.05	37.47
UCCMW-21	49.67	7/20/2020	11:12	12.05	37.62
UCCMW-23	41.62	7/20/2020	11:03	3.75	37.87
UCCMW-24	41.98	7/20/2020	15:36	4.77	37.21
UCCMW-25	41.25	7/20/2020	13:48	4.59	36.66
UCCMW-27	37.77	7/20/2020	10:22	5.06	32.71
UCCMW-28D	53.74	7/20/2020	12:58	16.64	37.10
UCCMW-29	41.49	7/20/2020	13:15	5.12	36.37
UCCMW-29D	41.59	7/20/2020	13:16	5.22	36.37
UCCMW-30D	43.42	7/20/2020	12:52	8.13	35.29
UCCMW-31D	39.08	7/20/2020	15:40	5.09	33.99
UCCMW-32	38.25	7/20/2020	12:32	5.98	32.27
UCCMW-32D	38.21	7/20/2020	12:30	5.87	32.34
UCCMW-33D	38.13	7/20/2020	12:15	6.72	31.41
UCCMW-34D	36.73	7/20/2020	12:25	5.57	31.16
UCCMW-35D	37.86	7/20/2020	12:38	5.97	31.89
UCCMW-36D	39.10	7/20/2020	13:20	4.42	34.68

Abbreviations:
BTOC Below top of casing
NA Not applicable
NAVD 88 North American Vertical Datum of 1988
NM Not measured due to full drum covering well

Table 3.1
Temporary Soil and Groundwater Sample Location Information

Event Nickname	Event Start	Event End	Floyd|Snider Location Name	Location Name in Source Report	Location Type
Bothell Landing-2007 Phase II ESA	7/9/2007	8/9/2007	HWA-BH-13	BH-13	Core
			HWA-BH-19	BH-19	Core
			HWA-BH-2	BH-2	Core
			HWA-BH-20	BH-20	Core
			HWA-BH-21	BH-21	Core
			HWA-BH-3	BH-3	Core
			HWA-BH-4	BH-4	Core
			HWA-BH-5	BH-5	Core
			HWA-BH-6	BH-6	Core
			HWA-BH-11	BH-11	Core
			HWA-BH-17	BH-17	Core
			HWA-BH-8	BH-8	Core
			HWA-BH-9	BH-9	Core
Bothell Landing-2009 RI	9/4/2009	9/24/2009	BLBH-23		Core
			BLSS-1		Core
			BLSS-2		Core
Crossroads-2009 Phase II ESA	4/1/2009	4/7/2009	CDM-B1	B1	Geoprobe
			CDM-B10	B10	Geoprobe
			CDM-B11	B11	Geoprobe
			CDM-B12	B12	Geoprobe
			CDM-B13	B13	Geoprobe
			CDM-B18	B18	Geoprobe
			CDM-B2	B2	Geoprobe
			CDM-B3	B3	Geoprobe
			CDM-B7	B7	Geoprobe
			CDM-B8	B8	Geoprobe
Crossroads-2013 SubSurf Inv	5/9/2013	5/10/2013	CDM-B30	B30	Geoprobe
			CDM-B31	B31	Geoprobe
			CDM-B32	B32	Geoprobe
			CDM-B33	B33	Geoprobe
			CDM-B34	B34	Geoprobe
Grease Monkey-2009 Phase II ESA	5/19/2009	5/19/2009	GM-1		Geoprobe
			GM-2		Geoprobe
			GM-3		Geoprobe
			GM-4		Geoprobe
			GM-5		Geoprobe
			GM-6		Geoprobe
			BB-1		Core
			BC-6		Core
Safeway-2008+2010 Phase II	7/1/2008	7/1/2008	Swy-B1	B1	Geoprobe
			Swy-B2	B2	Geoprobe
			Swy-B3	B3	Geoprobe
			Swy-B4	B4	Geoprobe
			Swy-SB-5	SB-5	Geoprobe
			Swy-SB-6	SB-6	Geoprobe
Ultra-2001-2002 SubSurf Inv	7/19/2001	2/25/2002	F-SB-1	SB-1	Core
			F-SB-2	SB-2	Core
			F-SB-3	SB-3	Core
			F-SB-4	SB-4	Core
			F-SB-5	SB-5	Core
			F-SB-6	SB-6	Core
			F-SB-7	SB-7	Core
Ultra-2004 Subsurf Inv	7/22/2004	10/26/2004	EPI-B-1	B-1	Geoprobe
			EPI-B-10	B-10	Geoprobe
			EPI-B-11	B-11	Geoprobe
			EPI-B-12	B-12	Geoprobe
			EPI-B-13	B-13	Geoprobe
			EPI-B-14	B-14	Geoprobe
			EPI-B-15	B-15	Geoprobe
			EPI-B-16	B-16	Geoprobe
			EPI-B-2	B-2	Geoprobe
			EPI-B-3	B-3	Geoprobe
			EPI-B-4	B-4	Geoprobe
			EPI-B-5	B-5	Geoprobe
			EPI-B-6	B-6	Geoprobe
			EPI-B-7	B-7	Geoprobe
			EPI-B-8	B-8	Geoprobe
			EPI-B-9	B-9	Geoprobe
Ultra-2010 Phase II ESA	3/31/2010	4/1/2010	Px-SB01		Core
			Px-SB02		Core
			Px-SB03		Core
			Px-SB04		Core
			Px-SB05		Core

Table 3.1
Temporary Soil and Groundwater Sample Location Information

Event Nickname	Event Start	Event End	Floyd|Snider Location Name	Location Name in Source Report	Location Type
Ultra-2011 Phase II ESA	6/27/2011	6/28/2011	CDM-B20	B20	Core
			CDM-B29	B29	Core
			CDM-B19	B19	Core
			CDM-B21	B21	Core
			CDM-B24	B24	Core
			CDM-B25	B25	Core
			CDM-B26	B26	Core
			CDM-B27	B27	Core
			CDM-B28	B28	Core
Ultra-2013 SubSurf Inv	10/14/2013	10/18/2013	PP-1		Core
			PP-10		Core
			PP-11		Core
			PP-12		Core
			PP-13		Core
			PP-14		Core
			PP-15		Core
			PP-16		Core
			PP-17		Core
			PP-18		Core
			PP-19		Core
			PP-2		Core
			PP-20		Core
			PP-21		Core
			PP-22		Core
			PP-23		Core
			PP-24		Core
			PP-25		Core
			PP-26		Core
			PP-27		Core
			PP-28		Core
			PP-29		Core
			PP-3		Core
			PP-30		Core
			PP-4		Core
			PP-5		Core
			PP-6		Core
			PP-7		Core
			PP-8		Core
			PP-9		Core
Ultra-2015 UST Removal	11/17/2015	11/17/2015	UST-B-7.5		Point
			UST-ES-5		Point
			UST-SS-5		Point
			UST-WS-5		Point
			UST-NS-5		Point
Ultra-2016 GW Inv	6/22/2016	6/22/2016	FB-9		Core
Ultra-2016 SubSurf Inv	5/10/2016	5/12/2016	EAlb-B1	B1	Core
			EAlb-B2	B2	Core
			EAlb-B3	B3	Core
			EAlb-B4	B4	Core
			EAlb-B5	B5	Core
			EAlb-B6	B6	Core
			EAlb-B7	B7	Core
			EAlb-B8	B8	Core
			EAlb-B9	B9	Core
			EAlb-B10	B10	Core
			EAlb-B11	B11	Core
			EAlb-B12	B12	Core
			EAlb-B13	B13	Core
			EAlb-B14	B14	Core
			EAlb-B15	B15	Core
			EAlb-B16	B16	Core
			EAlb-B17	B17	Core
			EAlb-B18	B18	Core
			EAlb-B19	B19	Core
			EAlb-B20	B20	Core
			EAlb-B21	B21	Core
			EAlb-B22	B22	Core
Ultra-2017 Site Delineation	3/20/2017	4/5/2017	UCCB-1	B-1	Core
			UCCB-10	B-10	Core
			UCCB-2	B-2	Core
			UCCB-3	B-3	Core
			UCCB-4	B-4	Core
			UCCB-5	B-5	Core
			UCCB-8	B-8	Core
			UCCB-9	B-9	Core

Table 3.1
Temporary Soil and Groundwater Sample Location Information

Event Nickname	Event Start	Event End	Floyd|Snider Location Name	Location Name in Source Report	Location Type
Ultra-Aug 2015 SubSurf Inv	8/3/2015	8/4/2015	Lot5-1		Geoprobe
			Lot5-2		Geoprobe
			Lot5-3		Geoprobe
			Lot5-4		Geoprobe
			Lot5-5		Geoprobe
			Lot5-6		Geoprobe
			Lot8-1		Geoprobe
			Lot8-3		Geoprobe
			Lot8-4		Geoprobe
Ultra-Dec 2011 SubSurf Inv	12/14/2011	12/16/2011	ESS-B1		Geoprobe
			ESS-B2		Geoprobe
			ESD-B1		Geoprobe
			ESD-B2		Geoprobe
			PSD-B1		Geoprobe
			PSD-B2		Geoprobe
			PSD-B3		Geoprobe
			PSD-B4		Geoprobe
			PSD-B5		Geoprobe
			PSD-B6		Geoprobe
Ultra-Feb. 2018 HWA Recon GW Inv	2/13/2018	2/14/2018	UCCB-11	B-11	Well-Temp
			UCCB-12	B-12	Well-Temp
			UCCB-13	B-13	Well-Temp
			UCCB-14	B-14	Well-Temp
			UCCB-15	B-15	Well-Temp
			UCCB-16	B-16	Well-Temp
			UCCB-17	B-17	Well-Temp
			UCCB-18	B-18	Well-Temp
Ultra-May 2016 SubSurf Inv	5/3/2016	5/4/2016	EAIa-B1	B1	Geoprobe
			EAIa-B2	B2	Geoprobe
			EAIa-B3	B3	Geoprobe
			EAIa-B4	B4	Geoprobe
			EAIa-B5	B5	Geoprobe
			EAIa-B6	B6	Geoprobe
			EAIa-B7	B7	Geoprobe
			EAIa-B8	B8	Geoprobe
			EAIa-B9	B9	Geoprobe
			EAIa-B10	B10	Geoprobe
			EAIa-B11	B11	Geoprobe
Ultra-Nov 2011 SubSurf Inv	11/10/2011	11/21/2011	HWA-HH-1	HH-1	Core
			HWA-SB-N	SB-N	SubSlab
			HWA-SB-S	SB-S	SubSlab
			HWA-CH-B1	CH-B1	Core
			HWA-CH-B2	CH-B2	Core
			HWA-CH-B3	CH-B3	Core
			HWA-CH-B4	CH-B4	Core
			HWA-CH-B8	CH-B8	Core
			HWA-CH-B9	CH-B9	Core
			HWA-CH-B11	CH-B11	Core
			HWA-CH-B12	CH-B12	Core
			HWA-CH-B13	CH-B13	Core
Ultra-July 2020 DGIWP Sampling	7/13/2020	8/4/2020	UCCMW-28D		Core
			UCCMW-29		Core
			UCCMW-29D		Core
			UCCMW-30D		Core
			UCCMW-31D		Core
			UCCMW-32		Core
			UCCMW-32D		Core
			UCCMW-33D		Core
			UCCMW-34D		Core
			UCCMW-35D		Core
			UCCMW-36D		Core

Note:
Blanks indicate location name presented in the source report matches the name assigned by Floyd|Snider.

Abbreviations:
DGI Data Gaps Investigation
ESA Environmental Site Assessment
GW Groundwater
GWM Groundwater Monitoring Event
Inv Investigation
Recon Reconnaissance
RI Remedial Investigation
SubSurf Subsurface
UST Underground storage tank
WP Work Plan

Table 3.2
Summary of Well Status and Condition Verified During January 2020 Monitoring Well Reconnaissance Event

Well ID	Date of Measurement	Time of Measurement	Depth to Water (ft BTOC)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Total Depth (ft BTOC)	Total Depth (ft bgs)	TOC to Ground Surface (ft)	Casing Diameter (inches)	Damaged Monument?	Bolts Missing?	Flooded Monument?	Well Plug Missing?	Ecology Well ID	Comments
BB-2	1/9/2020	9:49	4.39	9	19	18.74	19.10	0.36	2	No	2/2	No	No	BAR 280	South of expected location. In driveway to Main St. Soft bottom.
BB-3	1/9/2020			10	20										Not found.
BC-5	1/9/2020	8:17	7.02	14	20	16.14	16.50	0.36	2	See comment	1/2	No	No	Missing	No Ecology tag. No concrete in monument around PVC (just, sand).
BI-3	1/9/2020	12:41	2.12	5	10	6.80	8.60	1.80	2	No	No	Yes	No	Missing	Well monument labeled as UCCMW-23 but much closer to BI-3 map location, slip cap near bottom of monument, soft bottom.
BLMW-1	1/9/2020	NM		5	15										Not found. Possibly in large stormwater puddle/pond.
BLMW-3	1/9/2020			5	15										Not found. New street/fresh asphalt.
BLMW-4	1/9/2020			5	15										Not found. New street and planters in area.
BLMW-5	1/9/2020			5	10										Not found. New concrete where well is supposed to be.
BLMW-5R	1/9/2020			5	15										Not found. New concrete where well is supposed to be.
BLMW-7	1/9/2020			5	10										Not found. New asphalt where well is supposed to be.
BLMW-9	1/9/2020			5	15										Not found. 10-inch diameter sewer monument within 15 feet.
BLMW-10	1/9/2020	8:45	4.78	5	10	14.61	14.75	0.14	2	No	No	Yes	No	BHZ 442	Well buried under 3-4" of gravel.
INJ-1	1/9/2020	10:27	7.70			22.29			4	No	No	No	No	BJA 503	
INJ-2	1/9/2020	10:41	8.43	8	23	21.90	22.20	0.30	4	No	No	No	No	BJA 504	Some sediment on probe tip upon retrieval.
Unknown	1/9/2020	14:35	9.58	8	13	12.29	12.50	0.21	1	No	All	Yes	No	BJA 560	No ID on well or monument. Located on source property.
INJ-?	1/9/2020	14:27	9.34	8	13	12.07	12.40	0.33	1	No	No	Yes	No	BJA 561	ID not legible on monument lid (looks like INJ-13 or INJ-18). Monument full of soapy water and thick/hard film covering everything (almost rusty looking).
INJ-4	1/9/2020	14:46	9.47			23.03	23.40	0.37	4	No	No	No	No	BJA 506	
INJ-5	1/9/2020	NM	NM								2/3				Cross-threaded bolt stuck. Unable to open monument lid.
INJ-6	1/9/2020	15:04	9.71			23.01	23.3	0.29	4	No	No	No	No	BJA 508	
INJ-7	1/9/2020	10:22	7.63			12.62			1	No	No	Yes	No	BJA 551	
INJ-8	1/9/2020	10:39	8.07			12.59			1	No	1	Yes	No	BJA 552	Soft bottom.
INJ-9	1/9/2020	10:21	8.35	8	23	12.85	13.10	0.25	1	No	No	Yes	No	BJA 553	Soft bottom.
INJ-10	1/9/2020	11:06	8.58			12.77			1	No	No	Yes	No	BJA 554	
INJ-11	1/9/2020	11:14	8.73			12.35			1	No	1/3	Yes	No	BJA 555	
INJ-12	1/9/2020	11:23	8.94			11.25			3/4	No	No	Yes	No	BJA 556	
INJ-13	1/9/2020	14:26	9.34			12.53	12.80	0.27	1	No	3/3	Yes	No	BJA 557	Torque cap doesn't fit (glued in?) but screw top acts as retrofitted slip cap.
INJ-14	1/9/2020	14:55	9.51			12.55	12.90	0.35	1	No	No	Yes	No	BJA 558	
INJ-15	1/9/2020	15:00	9.46			12.40	12.75	0.35	1	No	No	No	No	BJA 559	
RMW-4	1/9/2020			15	25										Not found. Nearby asphalt patch in concrete; possibly from well being decommissioned.
RMW-11D	1/9/2020			22	32										Not found. Cleanout nearby; new concrete and landscaping in area.
UCCMW-1	1/9/2020	11:27	9.14	4.5	14.5	14.55	14.80	0.25	2	No	2/3	No	No	Missing	Monument dirty; rusty, no ecology tag.
UCCMW-2	1/9/2020	11:29	7.71	3	13.5	13.38	13.55	0.17		Yes	3/3	No	No	Missing	Threaded cap; all bolts missing, but flanges are all stripped/too big.
UCCMW-3R	1/9/2020	13:45	8.83	3.5	13.5	15.90	14.90	-1.00	2	Yes	All	No	No	BHZ 439	Monument is fully exposed above ground surface (including PVC riser). Monument lid read "MW-3R". Updated ID in table from UCCMW-3 to UCCMW-3R.
UCCMW-4D	1/9/2020	10:10	8.20	35	40	39.57	39.80	0.23	2	No	No	Yes	No	BHZ 404	
UCCMW-5	1/9/2020	10:04	10.01	10	20	19.19	19.40	0.21		No	No	Yes	No	BHZ 436	Has threaded cap.
UCCMW-6	1/9/2020	12:30	4.33	5	15	13.20	14.25	1.05	2	No	No	No	No	BHZ 402	Well casing is sitting below base of monument.
UCCMW-7	1/9/2020	9:40	4.84	8	18	17.99	18.50	0.51		Yes	1/3	No	No	BHZ 438	Soft bottom; missing flange where bolt is missing; partially cemented lid took considerable effort to open.
UCCMW-8	1/9/2020	9:12	4.40	5	15	14.33	14.60	0.27	2	No	1/3	No	No	BHZ 441	Soft bottom.
UCCMW-9	1/9/2020	12:52	3.80	5	15	10.77	12.35	1.58	2	No	No	No	No	BHZ 403	Monument has been raised (sitting on cinder blocks) so well casing is below base of monument.
UCCMW-10	1/9/2020	13:17	4.36	5	15	10.60	10.80	0.20	2	Yes	No	No	No	BHZ 437	Monument in left turn lane (west bound) of Main St. Bolts were cemented in; required significant effort to open. Soft bottom. Monument lid cracked.
UCCMW-11S	1/9/2020	13:57	7.89	8	18	17.64	17.95	0.31	2	No	1/2	Yes	No		Threaded cap.
UCCMW-11	1/9/2020	13:47	8.00	18	23	22.35	22.50	0.15	1	Yes	No	Yes	No	BIE 899	Threaded cap; one flange broken so bolt is not functional; skirt is cracked; soft bottom.

Table 3.2
Summary of Well Status and Condition Verified During January 2020 Monitoring Well Reconnaissance Event

Well ID	Date of Measurement	Time of Measurement	Depth to Water (ft BTOC)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Total Depth (ft BTOC)	Total Depth (ft bgs)	TOC to Ground Surface (ft)	Casing Diameter (inches)	Damaged Monument?	Bolts Missing?	Flooded Monument?	Well Plug Missing?	Ecology Well ID	Comments
UCCMW-12S	1/9/2020	14:14	8.86	8	18	17.42	17.60	0.18	1	Yes	All	No	No	Missing	Well monument full of dirt and thorned plant; threaded cap; no lid.
UCCMW-12D	1/9/2020	14:20	8.81	25	30	29.36	29.50	0.14	2	Yes	2/2	No	No	BIE 861	Threaded cap, hole in lid. Location on map is 12S; needs to be switched.
UCCMW-13S	1/9/2020	14:00	8.74	9	19	18.40	18.90	0.50	1	No	All	No	Yes	BIE 816	1-inch PVC inside of a 2-inch PVC casing. Torque cap on 2-inch casing creates seal, however, 2-inch PVC does not have a slip cap. Standing water was observed in annular space between 1-inch and 2-inch PVC. Soft bottom.
UCCMW-13D	1/9/2020	NM	NM	19	24						All				Well exists, but cannot open because the lid is partially covered by an Ecology block.
UCCMW-14S	1/9/2020			10	20										Not found. Possibly buried/overgrown by grass or gone.
UCCMW-14D	1/9/2020			21	26										Not found. Possibly buried/overgrown by grass or gone.
UCCMW-15	1/9/2020	14:17	9.06			18.14	18.60	0.46	1	No	No	Yes	No	BIE 817	Screw cap.
UCCMW-16	1/9/2020	10:58	7.01	9	19	18.78	19.00	0.22	1	No	No	Yes	No	BIE 812	Threaded cap.
UCCMW-17	1/9/2020	11:08	8.69	10	20	19.55	19.85	0.30	1	Yes	1/2	No	No	BIE 811	Threaded cap; broken flange where bolt is missing; other flange is stripped so bolt is not functional.
UCCMW-18	1/9/2020	10:58	8.76	10	20	19.56	19.9	0.34	1	No	No	Yes	No	BIE 813	
UCCMW-19	1/9/2020	10:05	8.18	10	20	19.44	19.65	0.21	1	No	No	No	No	BIE 819	
UCCMW-20	1/9/2020	12:14	7.88	8	18	16.10	16.60	0.50	1	Yes	2	No	No	Illegible	Threaded cap. Ecology tag present, but cannot read.
UCCMW-21	1/9/2020	12:07	12.24	12	22	20.93	21.40	0.47	2	No	1/2	Yes	No	Illegible	Ecology tag present, but cannot read.
UCCMW-23	1/9/2020	13:30	3.47	8	18	15.20	16.80	1.60	1	No	No	Yes	No	BIE 862	Slip cap.
UCCMW-24	1/9/2020	9:36	4.50	8	18	16.82	16.90	0.08	1	No	No	No	No	BIE 863	1-inch SCH80 PVC inside of 2-inch SCH40 PVC. Slip cap over 2-inch casing. Both PVC casings cut at high angles. Water level measured from North high point. Soft bottom.
UCCMW-25	1/9/2020	9:25	4.32	8	18	17.04	17.10	0.06	1	No	No	No	No	BIE 975	Slip cap.
UCCMW-26	1/9/2020			5	15										Not found. Possibly buried/overgrown by grass or gone.
UCCMW-27	1/9/2020	8:57	4.53	5	15	14.30	14.70	0.40	2	No	No	Yes	No	BJA 501	Well located under ~3-inches of gravel. Soft bottom. Hydrocarbon-like odor observed during water level measurement.

Abbreviations:

bgs Below ground surface
BTOC Below top of casing
Ecology Washington State Department of Ecology
ft Feet
NM Not measured
PVC Polyvinyl chloride

Table 3.3
Well Information

Floyd|Snider Well Location Name	Well Location Name in Source Report [1]	Earliest Associated Data Collection Event	Event Start	Event End
BB-2		Bothell Landing-2009 RI	9/4/2009	9/24/2009
BC-3		Riverside-Sept 2008 Phase II ESA	9/5/2008	9/5/2008
BC-5				
BI-3		Ultra-June 2014 GWM	6/2/2014	6/6/2014
BLMW-1		Bothell Landing-2009 RI	9/4/2009	9/24/2009
BLMW-3				
BLMW-4				
BLMW-5				
BLMW-5R		Ultra-Sept 2014 Qrtly GWM	9/9/2014	12/19/2014
BLMW-7		Bothell Landing-2009 RI	9/4/2009	9/24/2009
BLMW-8				
BLMW-9		Area Wide-June 2014 Qrtly GWM	6/11/2014	6/13/2014
BLMW-10				
EAIa-Geotech Well	Geotech Well	Ultra-May 2016 SubSurf Inv	5/3/2016	5/4/2016
INJ-2		Ultra-Dec 2014 Qrtly GWM	12/8/2014	12/19/2014
INJ-4		Bothell Landing-Feb 2015 Phase II ESA	2/24/2015	2/24/2015
INJ-6				
INJ-9		Ultra-Oct 2015 Qrtly GWM	10/20/2015	10/26/2015
RMW-4		Riverside-2009 RI	9/14/2009	9/15/2009
RMW-11D	RMW-11	Riverside-2009 RI	9/14/2009	9/15/2009
UCCMW-1	MW-1	Ultra-2001-2002 SubSurf Inv	7/19/2001	2/25/2002
UCCMW-2	MW-2			
UCCMW-3	MW-3			
UCCMW-3R	MW-3R	Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-4D	MW-4	Ultra-Jan 2014 GWM	1/8/2014	1/9/2014
UCCMW-5		Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-6		Ultra-Jan 2014 GWM	1/8/2014	1/9/2014
UCCMW-7		Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-8		Ultra-May 2014 Baseline Qrtly GWM	5/28/2014	5/29/2014
UCCMW-9		Ultra-Jan 2014 GWM	1/8/2014	1/9/2014
UCCMW-10		Area Wide-June 2014 Qrtly GWM	6/11/2014	6/13/2014
UCCMW-11	UCCMW-11D	Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-11S				
UCCMW-12D				
UCCMW-12S				
UCCMW-13D		Ultra-June 2014 GWM	6/2/2014	6/6/2014
UCCMW-13S		Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-14D				
UCCMW-14S				
UCCMW-15				
UCCMW-16				
UCCMW-17				
UCCMW-18		Ultra-August 2014 GWM	8/13/2014	8/20/2014
UCCMW-19		Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-20				
UCCMW-21				
UCCMW-22		Ultra-June 2014 GWM	6/2/2014	6/6/2014
UCCMW-23		Ultra-May 2014 GWM	5/11/2014	5/15/2014
UCCMW-24				
UCCMW-25				
UCCMW-26		Ultra-Mar 2015 Qrtly GWM	3/23/2015	4/2/2015
UCCMW-27				
UCCMW-28D		Ultra-July 2020 DGIWP Sampling	7/13/2020	8/4/2020
UCCMW-29				
UCCMW-29D				
UCCMW-30D				
UCCMW-31D				
UCCMW-32				
UCCMW-32D				
UCCMW-33D				
UCCMW-34D				
UCCMW-35D				
UCCMW-36D				

Note:

1 Blank cells indicate that the location name presented in the source report matches the name in use by Floyd|Snider. The Location ID and Study Specific Location ID fields in EIM generally match the prefixes in use by Floyd|Snider, but may not exactly match either location ID in this table. For example, Floyd|Snider location UCCMW-4D is assigned location ID and Study Specific Location ID of "ULTRAUCCMW-4" and "BOTHELL ULTRA UCC MW-4", respectively, in EIM. The naming convention used by Floyd|Snider retains the unique "UCC" identifier and contains a "D" suffix to indicate that the well's screened depth is deeper than 30 feet below ground surface.

Abbreviations:

DGI Data Gaps Investigation
EIM Environmental Information Management
ESA Environmental Site Assessment
GW Groundwater
GWM Groundwater Monitoring Event
Inv Investigation
Qrtly Quarterly
RI Remedial Investigation
SubSurf Subsurface
WP Work Plan

Table 5.1
Groundwater Screening Levels (μg/L)

Chemical [1]	CAS No.	MTCA Method A Criteria [2]	Minimum MTCA Method B Criteria [3]	Minimum Groundwater State and Federal MCLs [4]	Groundwater Maximum Contaminant Level Goal [5]	Groundwater Vapor Intrusion Screening Level [6]	Groundwater Screening Level [7]
Total Metals							
Arsenic [8]	7440-38-2	5.0		10	0		5.0
Chlorinated Volatile Organic Compounds							
Tetrachloroethene	127-18-4	5.0		5.0	0	24	5.0
Trichloroethene	79-01-6	5.0		5.0	0	1.5	1.5
cis-1,2-Dichloroethene	156-59-2		16	70	70		16
trans-1,2-Dichloroethene	156-60-5		160	100	100	77	77
Vinyl chloride	75-01-4	0.20		2.0	0	0.35	0.20
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	630-20-6					7.4	7.4
1,1,1-Trichloroethane	71-55-6	200		200	200	5,500	200
1,1,2,2-Tetrachloroethane	79-34-5					6.2	6.2
1,1,2-Trichloroethane	79-00-5			5.0	3.0	4.6	3.0
1,1-Dichloroethane	75-34-3					11	11
1,1-Dichloroethene	75-35-4			7.0	7.0	130	7.0
1,2,3-Trichloropropane	96-18-4		0.0015			21	0.0015
1,2,4-Trichlorobenzene	120-82-1			70	70	38	38
1,2,4-Trimethylbenzene	95-63-6					240	240
1,2-Dibromo-3-chloropropane	96-12-8			0.20	0	0.16	0.16
1,2-Dibromoethane	106-93-4	0.010		0.050	0	0.30	0.010
1,2-Dichlorobenzene	95-50-1			600	600	2,500	600
1,2-Dichloroethane	107-06-2	5.0		5.0	0	4.2	4.2
1,2-Dichloropropane	78-87-5			5.0	0	10	5.0
1,1-Dichloropropene	563-58-6						NE
1,2,3-Trichlorobenzene	87-61-6						NE
1,3,5-Trimethylbenzene	108-67-8		80			170	80
1,3-Dichlorobenzene	541-73-1						NE
1,3-Dichloropropane	142-28-9						NE
1,4-Dichlorobenzene	106-46-7			75	75	4.9	4.9
2,2-Dichloropropane	594-20-7						NE
2-Chloroethyl vinyl ether	110-75-8						NE
2-Chlorotoluene	95-49-8		160				160
2-Hexanone	591-78-6		40			7,300	40
4-Chlorotoluene	106-43-4						NE
Acetone	67-64-1		7200			15,000,000	7200
Bromobenzene	108-86-1		64		0	630	64
Bromochloromethane	74-97-5						NE
Bromodichloromethane	75-27-4			80	0	1.8	1.8
Bromoform	75-25-2			80	0	220	80
Bromomethane	74-83-9					13	13
Carbon disulfide	75-15-0					400	400
Carbon tetrachloride	56-23-5			5.0	0	0.56	0.56
Chlorobenzene	108-90-7			100	100	290	100
Chloroethane	75-00-3					15,000	15,000
Chloroform	67-66-3			80	70	1.2	1.2
Chloromethane	74-87-3					150	150
Dibromochloromethane	124-48-1			80	60		60
Dibromomethane	74-95-3		80			97	80
Dichlorodifluoromethane	75-71-8					4.2	4.2
Hexachlorobenzene	118-74-1			1.0	0	0.31	0.31
Hexachlorobutadiene	87-68-3					0.80	0.80
Hexachloroethane	67-72-1					3.8	3.8
iso-Propylbenzene	98-82-8					910	910
Iodomethane	74-88-4						NE
Methyl ethyl ketone	78-93-3					1,700,000	1,700,000
Methyl iso butyl ketone	108-10-1					470,000	470,000
Methylene chloride	75-09-2	5.0		5.0	0	1,200	5.0
Methyl-Tert-Butyl Ether	1634-04-4	20				860	20
n-Butylbenzene	104-51-8		400				400
n-Propylbenzene	103-65-1		800			2,300	800
sec-Butylbenzene	135-98-8		800				800
Styrene	100-42-5			100	100	8,100	100
tert-Butylbenzene	98-06-6		800				800
Trichlorofluoromethane	75-69-4					120	120
Vinyl acetate	108-05-4					7,800	7,800
Benzene, Toluene, Ethylbenzene, and Xylenes							
Benzene	71-43-2	5.0		5.0	0	2.4	2.4
Ethylbenzene	100-41-4	700		700	700	2,800	700
Toluene	108-88-3	1,000		1,000	1,000	15,000	1,000
Xylene (total) [9]	1330-20-7	1,000		10,000	10,000	320	320

Table 5.1
Groundwater Screening Levels (µg/L)

Chemical (1)	CAS No.	MTCA Method A Criteria (2)	Minimum MTCA Method B Criteria (3)	Minimum Groundwater State and Federal MCLs (4)	Groundwater Maximum Contaminant Level Goal (5)	Groundwater Vapor Intrusion Screening Level (6)	Groundwater Screening Level (7)
Total Petroleum Hydrocarbons							
Gasoline-Range Organics	GRO	800					800
Diesel-Range Organics	DRO	500					500
Oil-Range Organics	ORO	500					500

Notes:

All criteria are rounded to two significant figures.

Blanks are intentional; no criteria exist.

1 Groundwater screening levels were developed for chemicals retained as candidates to become COPCs in the DGI Work Plan (Floyd|Snider 2020a) or analyzed during the DGI Work Plan event.

2 MTCA Method A groundwater criteria are from WAC Table 720-1 for all chemicals.

3 MTCA Method B groundwater criteria is considered when (a) MTCA Method A criteria are not available for any chemical previously identified as a COPC for the Site (i.e., cis- and trans-dichloroethene) or (b) no other applicable or relevant and appropriate requirements under state or federal laws are available. MTCA Method B groundwater criteria listed in this table are the most stringent from among cancer and noncancer MTCA Method B criteria listed in Ecology's February 2021 CLARC data tables. MTCA Method B criteria may be calculated with Eqn. 720-1 and 720-2 and MTCA default input values.

4 Criteria listed in this table are the lowest of the federal and state MCLs established in 40 CFR 141 and WAC 326-290-310, respectively, for each chemical.

5 MTCA Method A requires consideration of federal MCLGs, which represent the concentration of a chemical that may be present in drinking water without any known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals. If other criteria are listed in this table and the MCLG is equivalent to zero, the MCLG is not considered when developing site screening levels.

6 Criteria in this table are the lowest of the MTCA Method B vapor intrusion screening levels protective of cancer and noncancer endpoints for each chemical, calculated using MTCA Eqn. 750-1 and 750-2 and MTCA default input values for residential land use. Development and guidance for use of criteria protective of this pathway are described in Ecology's Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, as revised in 2019.

7 The groundwater screening level is the lowest of the criteria presented in this table, after adjusting for natural background. Groundwater screening levels are protective of direct contact and vapor intrusion pathways.

8 Washington State groundwater natural background is 5 µg/L (WAC Table 720-1).

9 Criteria developed for total xylenes. Laboratory results reported as m,p-xylene or o-xylene are summed and compared to the total xylene screening level.

Abbreviations:

CAS Chemical Abstracts Service
CFR Code of Federal Regulations
CLARC Cleanup Levels and Risk Calculation
COPC Chemical of potential concern
DGI Data Gaps Investigation
Ecology Washington State Department of Ecology
µg/L Micrograms per liter
MCL Maximum contaminant level
MCLG Maximum contaminant level goal
MTCA Model Toxics Control Act
NE Not established
Site Ultra Custom Care Cleaners Site
WAC Washington Administrative Code

Table 5.2
Screening Evaluation to Identify Groundwater Chemicals of Potential Concern: Detected Chemicals (µg/L)

		Information about Dataset [2,3]					Information about SL and Detected			Information about Non-Detect Results				COPC Information	
				Maximum Detected Result											
Chemical [1]	CAS No.	Number of Results	Percent of Detected Results	Result Value	Location	Date	Groundwater Screening Level [3]	Percent of Results that Exceed Criteria	Maximum Exceedance Factor [4]	Minimum Non-Detect Result	Maximum Non-Detect Result	Percent of Results that Exceed Criteria	Maximum 2020 Reporting Limit	Is Chemical a Groundwater COPC? [5]	Rationale
Metals, Total [6]															
Arsenic	7440-38-2	57	39%	180	BB-1	5/19/2009	5.0	25%	**36**	3.0	3.3	None	3.3	Yes	Maximum result >2 times the SL, more than 10% exceed.
Chlorinated Volatile Organic Compounds															
Tetrachloroethene	127-18-4	608	69%	1,700	PP-14	10/16/2013	5.0	31%	**340**	0.20	10	**0.16%**	1	Yes	Maximum result >2 times the SL, more than 10% exceed.
Trichloroethene	79-01-6	599	28%	190	PP-8	10/15/2013	1.4	10%	**140**	0.20	**10**	**1.3%**	1	Yes	Maximum result >2 times the SL, more than 10% exceed.
cis-1,2-Dichloroethene	156-59-2	599	32%	1,600	UCCMW-1	10/21/2015	16	8.5%	**100**	0.20	4.0	None	1	Yes	Maximum result >2 times the SL.
trans-1,2-Dichloroethene	156-60-5	592	2.2%	11	UCCMW-19	8/19/2014	77	None	None	0.20	10	None	1	Yes	Breakdown product of PCE/TCE.
Vinyl chloride	75-01-4	599	13%	280	UCCMW-18	1/28/2016	0.20	12%	**1,400**	0.020	**10**	**7.5%**	1	Yes	Maximum result >2 times the SL, more than 10% exceed.
Volatile Organic Compounds (VOCs)															
1,2,3-Trichlorobenzene	87-61-6	561	0.18%	0.20	UCCMW-9	9/13/2014	38	None	None	0.20	**15**	None	1	No	No exceedances.
1,2-Dichloroethane	107-06-2	592	0.84%	0.82	BLMW-8	9/4/2009	4.2	None	None	0.20	**10**	**1.0%**	1	No	Detected results meet the SL, less than 10% exceed.
Acetone	67-64-1	41	2.4%	7.1	BB-1	5/19/2009	7,200	None	None	5.0	25	None	25	No	No exceedances.
Bromodichloromethane	75-27-4	561	0.36%	0.23	UCCB-9	3/23/2017	1.8	None	None	0.20	10	**4.3%**	1	No	Detected results meet the SL, less than 10% exceed.
Carbon disulfide	75-15-0	41	2.4%	0.46	UCCMW-29D	7/13/2020	400	None	None	0.20	1.0	None	1	No	No exceedances.
Chlorobenzene	108-90-7	561	0.36%	0.55	CDM-B18	4/7/2009	100	None	None	0.20	10	None	1	No	No exceedances.
Chloroethane	75-00-3	592	0.34%	4.1	UCCMW-19	9/16/2014	15,000	None	None	1.0	50	None	5	No	No exceedances.
Chloroform	67-66-3	561	13%	5.7	UCCB-9	3/23/2017	1.2	1.8%	**4.8**	0.20	**10**	**4.3%**	1	Yes	Maximum result >2 times the SL.
Chloromethane	74-87-3	561	0.18%	1.0	UCCMW-19	9/16/2014	150	None	None	1.0	50	None	5	No	No exceedances.
Hexachlorobutadiene [7]	87-68-3	564	0.18%	0.20	UCCMW-9	9/13/2014	0.80	None	None	0.20	**10**	**12%**	5	Yes	Detected results meet the SL, more than 10% exceed.
Methyl iso butyl ketone	108-10-1	41	2.4%	4.5	BB-1	5/19/2009	470,000	None	None	2.0	**10**	None	10	No	No exceedances.
Methyl-tert-butyl ether	1634-04-4	41	2.4%	0.30	BB-1	5/19/2009	20	None	None	0.20	**1.0**	None	1	No	No exceedances.
Benzene, Toluene, Ethylbenzene, and Xylenes															
Benzene	71-43-2	120	5.0%	15	BLMW-3	9/17/2009	2.4	3.3%	**6.3**	0.20	1.0	None	1	Yes	Maximum result >2 times the SL.
Ethylbenzene	100-41-4	120	1.7%	3.5	CDM-B3	4/2/2009	700	None	None	0.20	4.0	None	1	No	No exceedances.
Toluene	108-88-3	120	0.83%	1.0	UCCMW-9	9/13/2014	1,000	None	None	1.0	5.0	None	5	No	No exceedances.
Xylene (meta & para)	108-38-3/ 106-42-3	110	3.6%	4.1	CDM-B3	4/2/2009	None	None	None	0.40	5.0	None	2	No	No exceedances.
Xylene (ortho)	95-47-6	110	1.8%	1.0	UCCMW-9	9/13/2014	None	None	None	0.20	4.0	None	1	No	No exceedances.
Xylenes (total)	1330-20-7	120	16%	4.1	CDM-B3	4/2/2009	320	None	None	0.40	5.0	None	2	No	No exceedances.
Total Petroleum Hydrocarbons															
Gasoline-Range Organics	GRO	102	24%	380	CDM-B2	4/7/2009	800	None	None	100	400	None	0.11	No	No exceedances.
Diesel-Range Organics	DRO	102	19%	510	EAIa-B8	5/4/2016	500	0.98%	**1.0**	50	320	None	0.22	No	Maximum result <2 times the SL, less than 10% exceed.
Oil-Range Organics	ORO	100	19%	630	BLMW-8	12/16/2014	500	3.0%	**1.3**	210	**510**	**1.0%**	0.22	No	Maximum result <2 times the SL, less than 10% exceed.

Notes:

All SLs and results presented in this table are rounded to two significant figures.

BOLD Chemical whose maximum nondetect result exceeds SL.

RED/BOLD Chemical whose maximum detected result exceeds the SL.

RED/BOLD Chemical identified as a COPC.

1 This table includes only chemicals detected in groundwater and retained as candidates to become COPCs in the DGI Work Plan.

2 The dataset includes all groundwater data collected after January 1, 2009, within the study area defined in the DGI Work Plan and shown on Figure 5.1.

3 Groundwater SLs were developed in Table 5.1 and are protective of drinking water and vapor intrusion pathways.

4 The exceedance factor is calculated by dividing the maximum detected result by the SL. It is rounded to two significant figures.

5 Chemicals are ellminated as COPCs if the following two criteria in WAC 173-340-720(9)(e)(i-ii) are met: (1) the exceedance factor does not exceed 2, and (2) less than 10% of results exceed the SL.

6 Both total and dissolved metals data were collected during historical sampling events. Only total metals results are presented in this table; groundwater SLs developed in Table 5.1 are applicable to the total metals fraction.

7 Hexachlorobutadiene is listed as a VOC in this table because it has historically been analyzed for at the Site using a VOC method.

Abbreviations:

CAS Chemical Abstracts Service
COPC Chemical of potential concern
DGI Data Gaps Investigation
µg/L Micrograms per liter
PCE Tetrachloroethene
Site Ultra Custom Care Cleaners Site
SL Screening level
TCE Trichloroethene
WAC Washington Administrative Code

Table 5.3
Screening Evaluation to Identify Groundwater Chemicals of Potential Concern: Chemicals Not Detected in Groundwater (µg/L)

		Information about Dataset [2]				Information about SL and ND		Information about COPC Status	
Chemical [1]	CAS No.	Number of Results	Minimum Non-Detect Result	Maximum Non-Detect Result	Maximum 2020 Reporting Limit	Groundwater Screening Level [3]	Percent of Results That Exceed SL	Is Chemical a Groundwater COPC? [4,5]	Rationale
Volatile Organic Compounds									
1,1,1,2-Tetrachloroethane	630-20-6	561	0.20	**10**	1.0	7.1	**0.71%**	No	2020 PQL in compliance with SL. See Note 4.
1,1,1-Trichloroethane	71-55-6	592	0.20	10	1.0	200	None	No	No exceedances.
1,1,2,2-Tetrachloroethane	79-34-5	561	0.20	**10**	1.0	6.2	**0.71%**	No	2020 PQL in compliance with SL. See Note 4.
1,1,2-Trichloroethane	79-00-5	561	0.20	**10**	1.0	3.0	**2.9%**	No	2020 PQL in compliance with SL. See Note 4.
1,1-Dichloroethane	75-34-3	592	0.20	10	1.0	11	None	No	No exceedances.
1,1-Dichloroethene	75-35-4	592	0.20	10	1.0	7.0	**0.68%**	No	2020 PQL in compliance with SL. See Note 4.
1,2,3-Trichloropropane	96-18-4	561	0.20	**10**	**1.0**	0.0015	**100%**	No	Not suspected of being present at the Site; see Note 5.
1,2,4-Trichlorobenzene	120-82-1	564	0.20	13	1.0	38	None	No	No exceedances.
1,2,4-Trimethylbenzene	95-63-6	41	0.20	1.0	1.0	240	None	No	No exceedances.
1,2-Dibromo-3-chloropropane	96-12-8	561	1.0	**65**	**5.0**	0.16	**100%**	No	Not suspected of being present at the Site; see Note 5.
1,2-Dibromoethane	106-93-4	561	0.02	**10**	**0.10**	0.010	**100%**	No	Not suspected of being present at the Site; see Note 5.
1,2-Dichlorobenzene	95-50-1	564	0.20	10	1.0	600	None	No	No exceedances.
1,2-Dichloropropane	78-87-5	561	0.20	**10**	1.0	5.0	0.71%	No	2020 PQL in compliance with SL. See Note 4.
1,3,5-Trimethylbenzene	108-67-8	41	0.20	1.0	1.0	80	None	No	No exceedances
1,4-Dichlorobenzene	106-46-7	564	0.20	**10**	1.0	4.9	1.1%	No	2020 PQL in compliance with SL. See Note 4.
2-Chlorotoluene	95-49-8	561	0.20	10	1.0	160	None	No	No exceedances.
2-Hexanone	591-78-6	41	2.0	10	10	40	None	No	No exceedances
Bromobenzene	108-86-1	561	0.20	10	1.0	64	None	No	No exceedances.
Bromoform	75-25-2	561	1.0	50	5.0	80	None	No	No exceedances.
Bromomethane	74-83-9	561	0.20	**19**	1.0	13	0.18%	No	2020 PQL in compliance with SL. See Note 4.
Carbon tetrachloride	56-23-5	561	0.20	**10**	**1.0**	0.56	**6.4%**	No	Not suspected of being present at the Site; see Note 5.
Dibromochloromethane	124-48-1	561	0.20	10	1.0	60	None	No	No exceedances.
Dibromomethane	74-95-3	561	0.20	10	1.0	80	None	No	No exceedances.
Dichlorodifluoromethane	75-71-8	561	0.20	**13**	1.0	5.6	**0.89%**	No	2020 PQL in compliance with SL. See Note 4.
Hexachlorobenzene	118-74-1	3	**0.94**	**1.0**	None	0.31	**100%**	No	Not suspected of being present at the Site; see Note 5.
Hexachloroethane	67-72-1	3	0.94	1.0	None	3.1	None	No	No exceedances.
iso-Propylbenzene	98-82-8	41	0.20	1.0	1.0	720	None	No	No exceedances.
n-Butylbenzene	104-51-8	41	0.20	1.0	1.0	400	None	No	No exceedances
n-Propylbenzene	103-65-1	41	0.20	1.0	1.0	800	None	No	No exceedances
Methyl ethyl ketone	78-93-3	41	5.0	25	25	1,700,000	None	No	No exceedances.
Methylene chloride	75-09-2	592	1.0	**100**	5.0	5.0	**4.6%**	No	2020 PQL in compliance with SL. See Note 4.
Naphthalene	91-20-3	47	0.094	5.0	5.0	8.9	None	No	No exceedances.
Nitrobenzene	98-95-3	3	0.94	1.0	None	160	None	No	No exceedances.
sec-Butylbenzene	135-98-8	41	0.20	1.0	1.0	800	None	No	No exceedances
Styrene	100-42-5	41	0.20	1.0	1.0	100	None	No	No exceedances.
tert-Butylbenzene	98-06-6	41	0.20	1.0	1.0	800	None	No	No exceedances
Trichlorofluoromethane	75-69-4	561	0.20	10	1.0	120	None	No	No exceedances.
Vinyl acetate	108-05-4	41	1.0	5.0	5.0	7,800	None	No	No exceedances.

Notes:

All SLs and results presented in this table are rounded to two significant figures.

BOLD Historical nondetect result exceeds SL.

RED/BOLD Nondetect result analyzed in 2020 exceeds SL.

1 This table includes data for all chemicals with groundwater SLs (developed in Table 5.1) that were not detected in Site groundwater data collected on or after January 1, 2009.

2 The dataset includes all groundwater data from among the locations shown on Figure 5.1.

3 Groundwater SLs are protective of drinking water and vapor intrusion pathways.

4 Chemicals that were not detected in groundwater can be eliminated as groundwater COPCs if:
- * The maximum reporting limit (i.e., maximum nondetect result) measured in recent (2020) data for the chemical is less than the SL; or
- * Less than 10% of nondetect results exceed the SL and the maximum nondetect result is less than 2 times the screening level, per WAC 173-340-720(9)(e)(i-ii).

5 Chemicals that were not detected in groundwater are eliminated as COPCs if they are not suspected of being present at the Site based on site history and other knowledge, per WAC 173-340-720(9)(f)(v).

Abbreviations:

CAS Chemical Abstracts Service
COPC Chemical of potential concern
µg/L Micrograms per liter
ND Non-detect
Site Ultra Custom Care Cleaners Site
SL Screening level
WAC Washington Administrative Code

Table 5.4
Soil Screening Levels (mg/kg)

Chemical [1]	CAS No.	MTCA Method A Unrestricted Land Use [2]	Minimum Soil MTCA Method B/A [3]	Minimum Soil Simple Unrestricted Land Use Site TEE [4]	Soil Screening Level [5]
Chlorinated Volatile Organic Compounds					
Tetrachloroethene	127-18-4	0.050	480		0.050
Trichloroethene	79-01-6	0.030	12		0.030
cis-1,2-Dichloroethene	156-59-2		160		160
trans-1,2-Dichloroethene	156-60-5		1,600		1,600
Vinyl chloride	75-01-4	0.67	0.67		0.67
Volatile Organic Compounds (VOCs)					
1,1,1,2-Tetrachloroethane	630-20-6		38		38
1,1,1-Trichloroethane	71-55-6	2.0	160,000		2.0
1,1,2,2-Tetrachloroethane	79-34-5		5.0		5.0
1,1,2-Trichloroethane	79-00-5		18		18
1,1-Dichloroethane	75-34-3		180		180
1,1-Dichloroethene	75-35-4		4,000		4,000
1,2,3-Trichloropropane	96-18-4		0.033		0.033
1,2,4-Trichlorobenzene	120-82-1		34		34
1,2,4-Trimethylbenzene	95-63-6		800		800
1,2-Dibromo-3-chloropropane	96-12-8		1.3		1.3
1,2-Dibromoethane	106-93-4	0.0050	0.5		0.0050
1,2-Dichlorobenzene	95-50-1		7,200		7,200
1,2-Dichloroethane	107-06-2		11		11
1,2-Dichloropropane	78-87-5		27		27
1,3,5-Trimethylbenzene	108-67-8		800		800
1,3-Dichlorobenzene	541-73-1		NE		NE
1,4-Dichlorobenzene	106-46-7		190		190
2-Chlorotoluene	95-49-8		1,600		1,600
2-Hexanone	591-78-6		400		400
Acetone	67-64-1		72,000		72,000
Bromobenzene	108-86-1		640		640
Bromodichloromethane	75-27-4		16		16
Bromoform	75-25-2		130		130
Bromomethane	74-83-9		110		110
Carbon disulfide	75-15-0		8,000		8,000
Carbon tetrachloride	56-23-5		14		14
Chlorobenzene	108-90-7		1,600		1,600
Chloroethane	75-00-3		NE		NE
Chloroform	67-66-3		32		32
Chloromethane	74-87-3		NE		NE
Dibromochloromethane	124-48-1		12		12
Dibromomethane	74-95-3		800		800
Dichlorodifluoromethane	75-71-8		16,000		16,000
Hexachlorobenzene	118-74-1		0.63		0.63
Hexachlorobutadiene [6]	87-68-3		13		13
Hexachloroethane	67-72-1		25		25
iso-Propylbenzene	98-82-8		8,000		8,000
Methyl ethyl ketone	78-93-3		48,000		48,000
Methyl iso butyl ketone	108-10-1		6,400		6,400
Methylene chloride	75-09-2	0.020	480		0.020
Methyl-Tert-Butyl Ether	1634-04-4	0.10	560		0.10
Nitrobenzene	98-95-3		160		160
n-Butylbenzene	104-51-8		4,000		4,000
n-Propylbenzene	103-65-1		8,000		8,000
sec-Butylbenzene	135-98-8		8,000		8,000
Styrene	100-42-5		16,000		16,000
tert-Butylbenzene	98-06-6		8,000		8,000
Trichlorofluoromethane	75-69-4		24,000		24,000
Vinyl acetate	108-05-4		80,000		80,000
Benzene, Toluene, Ethylbenzene, and Xylenes					
Benzene	71-43-2	0.030	18		0.030
Ethylbenzene	100-41-4	6.0	8,000		6.0
Toluene	108-88-3	7.0	6,400		7.0
Xylene (meta & para)	108-38-3/106-42-3		16,000		16,000
Xylene (ortho)	95-47-6		16,000		16,000
Xylene (total)	1330-20-7	9.0	16,000		9.0
Total Petroleum Hydrocarbons					
Gasoline Range Organics	GRO	30		200	30
Diesel-Range Organics	DRO	2,000			2,000
Oil-Range Organics	ORO	2,000			2,000
Total Diesel- and Oil-Range Organics	DRO+ORO			460	460

Notes:

All screening levels presented in this table are rounded to two significant figures.

Blanks are intentional; no criteria exist.

1 Soil screening levels were developed for chemicals in analyte classes retained as candidates to become COPCs in the DGI Work Plan (Floyd|Snider 2020a).

2 MTCA Method A Soil Criteria for unrestricted land use are from WAC 173-340-900 Table 740-1.

3 When MTCA Method A criteria are not available for any chemical previously identified as a COPC for the Site, the criterion in this table is the lowest of MTCA Method B soil criteria protective of cancer and noncancer endpoints for that chemical. MTCA Method B soil criteria are consistent with Ecology's February 2021 CLARC data tables.

4 Simplified TEE soil screening levels are from WAC 173-340-900 Table 749-2.

5 The soil screening level is the lowest of the criteria presented in this table. Soil screening levels are protective of human health and ecological receptors via the direct contact pathway.

6 Hexachlorobutadiene is listed as a VOC in this table because it has historically been analyzed for at the Site using a VOC method.

Abbreviations:

CAS Chemical Abstracts Service
CLARC Cleanup Levels and Risk Calculation
COPC Chemical of potential concern
Ecology Washington State Department of Ecology
DGI Data Gaps Investigation
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
Site Ultra Custom Care Cleaners Site
TEE Terrestrial Ecological Evaluation
WAC Washington Administrative Code

Table 5.5
Screening Evaluation to Identify Soil Chemicals of Potential Concern: Detected Chemicals (mg/kg)

		Information about Dataset [2]					Information about SL and Detected Exceedances				Information about Non-Detect Results				Information about COPC Status	
				Information About Maximum Detected												
Chemical [1]	CAS No.	Number of Results	Percent of Detected Results	Result Value	Location	Date	Soil Screening Level [3]	Number of Results That Exceed Criteria	Percent of Results That Exceed Criteria	Maximum Exceedance Factor [4]	Minimum Non-Detect Result	Maximum Non-Detect Result	Maximum 2020 Non-Detect Result	Results that Exceed Criteria	Is Chemical a Soil COPC? [5]	Rationale
Chlorinated Volatile Organic Compounds																
Tetrachloroethene	127-18-4	310	39%	20	EPI-B-1	7/22/2004	0.050	9	2.9%	**400**	0.00053	10	0.052	**4%**	**Yes**	Maximum result >2x CUL.
Trichloroethene	79-01-6	292	6.2%	0.013	PSD-B3	12/14/2011	0.030	None	None	None	0.00053	10	**0.052**	**5%**	**Yes**	Breakdown product of PCE.
cis-1,2-Dichloroethene	156-59-2	293	4.1%	0.034	CDM-B5	4/2/2009	160	None	None	None	0.00053	10	0.052	None	**Yes**	Breakdown product of PCE.
Vinyl chloride	75-01-4	285	1.1%	0.0024	ESS-B2	12/15/2011	0.67	None	None	None	0.000045	10	0.0026	**5%**	**Yes**	Breakdown product of PCE.
Volatile Organic Compounds																
1,2,4-Trimethylbenzene	95-63-6	43	7.0%	11	UCCMW-36D	6/30/2020	800	None	None	None	0.00089	0.11	0.0012	None	No	No exceedances.
1,2-Dichlorobenzene	95-50-1	199	0.50%	0.0012	UCCMW-2	2/19/2002	7,200	None	None	None	0.00053	10	0.0520	None	No	No exceedances.
1,3,5-Trimethylbenzene	108-67-8	43	2.3%	0.36	UCCMW-36D	6/30/2020	800	None	None	None	0.00089	0.11	0.0012	None	No	No exceedances.
Acetone	67-64-1	43	37%	0.77	PSD-B4	12/15/2011	72,000	None	None	None	0.0051	0.52	0.52	None	No	No exceedances.
Carbon disulfide	75-15-0	43	2.3%	0.0013	UCCMW-29D	6/23/2020	8,000	None	None	None	0.00089	0.052	0.052	None	No	No exceedances.
Chloroform	67-66-3	191	0.52%	0.0042	UCCMW-4D	1/9/2014	32	None	None	None	0.00053	10	0.052	None	No	No exceedances.
iso-Propylbenzene	98-82-8	43	7.0%	2.8	UCCMW-36D	6/30/2020	8,000	None	None	None	0.00089	0.0015	0.0012	None	No	No exceedances.
Methyl ethyl ketone	78-93-3	43	19%	0.15	PSD-B4	12/15/2011	48,000	None	None	None	0.0045	0.26	0.26	None	No	No exceedances.
Methylene chloride	75-09-2	293	2.0%	0.52	EAIa-B3	5/3/2016	0.020	3.0	1.0%	**26**	0.0026	**10**	**0.26**	37%	**Yes**	Maximum result >2x CUL.
n-Butylbenzene	104-51-8	43	7.0%	2.9	UCCMW-36D	6/30/2020	4,000	None	None	None	0.00089	0.11	0.0012	None	No	No exceedances.
n-Propylbenzene	103-65-1	43	7.0%	9.9	UCCMW-36D	6/30/2020	8,000	None	None	None	0.00089	0.11	0.0012	None	No	No exceedances.
sec-Butylbenzene	135-98-8	43	7.0%	1.2	UCCMW-36D	6/30/2020	8,000	None	None	None	0.00089	0.11	0.0012	None	No	No exceedances.
Benzene, Toluene, Ethylbenzene, and Xylenes																
Benzene	71-43-2	87	4.6%	2.3	UCCMW-36D	6/30/2020	0.030	1	1.1%	**77**	0.00089	0.030	0.0011	None	**Yes**	Maximum result >2x CUL.
Ethylbenzene	100-41-4	87	2.3%	14	UCCMW-36D	6/30/2020	6.0	1	1.1%	**2.3**	0.00089	0.13	0.0011	None	**Yes**	Maximum result >2x CUL.
Xylene (meta & para)	108-38-3/ 106-42-3	71	2.8%	6.4	UCCMW-36D	6/30/2020	16,000	None	None	None	0.0018	0.13	0.0023	None	No	No exceedances.
Xylene (ortho)	95-47-6	71	2.8%	0.097	UCCMW-36D	6/30/2020	16,000	None	None	None	0.00089	0.13	0.0012	None	No	No exceedances.
Xylene (total)	1330-20-7	87	10%	6.4	UCCMW-36D	6/30/2020	9.0	None	None	None	0.0018	0.20	0.0023	None	No	No exceedances.
Total Petroleum Hydrocarbons																
Gasoline-Range Organics	GRO	72	5.6%	450	UCCMW-36D	6/30/2020	30	1	1.4%	**15**	1.5	1,800	25	4%	**Yes**	Maximum result >2x CUL.
Diesel-Range Organics	DRO	64	11%	780	CDM-B20	6/27/2011	2,000	None	None	None	25	170	130	None	No	No exceedances.
Oil-Range Organics	ORO	64	28%	3,100	UCCMW-36D	6/30/2020	2,000	1.0	1.6%	**1.6**	50	250	130	None	**No**	Maximum result <2 times the SL, less than 10% exceed.
Diesel- and Oil-Range Organics	DRO+ORO	64	33%	3,600	UCCMW-36D	6/30/2020	460	10	16%	**7.8**	50	250	130	None	**Yes**	Maximum result >2x CUL.

Notes:

All SLs and results presented in this table are rounded to two significant figures.

BOLD Non-detect result exceeds soil screening level.

RED/BOLD Chemical whose maximum detected result exceeds SL.

RED/BOLD Chemical retained as a COPC.

1 This table includes only chemicals that were detected in soil.

2 The dataset includes all soil data collected from the locations shown on Figure 5.2.

3 Soil SLs were developed in Table 5.4 and are protective of human health and ecological receptors via the direct contact pathway.

4 The exceedance factor is calculated by dividing the maximum detected result by the SL. It is rounded to two significant figures.

5 Chemicals are ellminated as COPCs if the following two criteria in WAC 173-340-740(7)(e)(i-ii) are met: (1) the exceedance factor does not exceed 2, and (2) less than 10% of samples exceed the SL.

Abbreviations:

CAS Chemical Abstracts Service

COPC Chemical of potential concern

CUL Cleanup level

mg/kg Milligrams per kilogram

PCE Tetrachloroethylene

SL Screening level

WAC Washington Administrative Code

Table 5.6
Screening Evaluation to Identify Soil Chemicals of Potential Concern: Chemicals Not Detected in Soil (mg/kg)

		Information about Dataset (2)					Information about Criteria and Non-Detect Exceedances				Information about COPC Status	
Chemical (1)	CAS No.	Number of Results	Number of Non-Detect Results	Minimum Non-Detect Result	Maximum Non-Detect Result	Maximum 2020 Non-Detect Result	Soil Screening Level (3)	Number of Non-Detect Results that Exceed SL	Percent of Non-Detect Results that Exceed SL	Maximum Exceedance Factor	Is Chemical a Soil COPC? (4,5)	Rationale
Chlorinated Volatile Organic Compounds												
trans-1,2-Dichloroethene	156-60-5	285	285	0.00053	10	0.052	1,600	None	None	None	**Yes**	Breakdown product of PCE.
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	178	178	0.00053	0.052	0.052	38	None	None	None	No	No exceedances.
1,1,1-Trichloroethane	71-55-6	285	285	0.00053	**10**	0.052	2.0	13	4.6%	**5.0**	No	2020 PQL in compliance with SL. See Note 4.
1,1,2,2-Tetrachloroethane	79-34-5	191	191	0.00053	**10**	0.052	5.0	13	6.8%	**2.0**	No	2020 PQL in compliance with SL. See Note 4.
1,1,2-Trichloroethane	79-00-5	191	191	0.00053	10	0.052	18	None	None	None	No	No exceedances.
1,1-Dichloroethane	75-34-3	285	285	0.00053	10	0.052	180	None	None	None	No	No exceedances.
1,1-Dichloroethene	75-35-4	285	285	0.00053	10	0.052	4,000	None	None	None	No	No exceedances.
1,2,3-Trichloropropane	96-18-4	191	191	0.00053	**10**	**0.052**	0.033	17	8.9%	**1.6**	No	Not suspected of being present at the Site; see Note 5.
1,2,4-Trichlorobenzene	120-82-1	191	191	0.00053	10	0.052	34	None	None	None	No	No exceedances.
1,2-Dibromo-3-chloropropane	96-12-8	191	191	0.0026	**50**	0.26	1.3	13	6.8%	**38**	No	2020 PQL in compliance with SL. See Note 4.
1,2-Dibromoethane	106-93-4	191	191	0.000045	**5.0**	0.0026	0.0050	14	7.3%	**1,000**	No	2020 PQL in compliance with SL. See Note 4.
1,2-Dichloroethane	107-06-2	285	285	0.00053	10	0.052	11	None	None	None	No	No exceedances.
1,2-Dichloropropane	78-87-5	191	191	0.00053	10	0.052	27	None	None	None	No	No exceedances.
1,3-Dichlorobenzene	541-73-1	191	191	0.00053	10	0.052	NE	None	None	None	No	No exceedances.
1,4-Dichlorobenzene	106-46-7	191	191	0.00053	10	0.052	190	None	None	None	No	No exceedances.
2-Chlorotoluene	95-49-8	191	191	0.00053	10	0.052	1,600	None	None	None	No	No exceedances.
2-Hexanone	591-78-6	43	43	0.0045	0.26	0.26	400	None	None	None	No	No exceedances.
Bromobenzene	108-86-1	191	191	0.00053	10	0.052	640	None	None	None	No	No exceedances.
Bromodichloromethane	75-27-4	191	191	0.00053	10	0.052	16	None	None	None	No	No exceedances.
Bromoform	75-25-2	191	191	0.00053	10	0.26	130	None	None	None	No	No exceedances.
Bromomethane	74-83-9	191	191	0.00053	10	0.052	110	None	None	None	No	No exceedances.
Carbon tetrachloride	56-23-5	191	191	0.00053	10	0.052	14	None	None	None	No	No exceedances.
Chlorobenzene	108-90-7	191	191	0.00053	10	0.052	1,600	None	None	None	No	No exceedances.
Chloroethane	75-00-3	285	285	0.0011	10	0.26	NE	None	None	None	No	No exceedances.
Chloromethane	74-87-3	191	191	0.0011	10	0.26	NE	None	None	None	No	No exceedances.
Dibromochloromethane	124-48-1	191	191	0.00053	10	0.052	12	None	None	None	No	No exceedances.
Dibromomethane	74-95-3	191	191	0.00053	10	0.052	800	None	None	None	No	No exceedances.
Dichlorodifluoromethane	75-71-8	191	191	0.00053	10	0.052	16,000	None	None	None	No	No exceedances.
Hexachlorobenzene	118-74-1	18	18	0.035	**1.7**	**1.7**	0.63	1	5.6%	**2.7**	No	Not suspected of being present at the Site; see Note 5.
Hexachlorobutadiene	87-68-3	191	191	0.0026	10	0.26	13	None	None	None	No	No exceedances.
Hexachloroethane	67-72-1	18	18	0.035	1.7	1.7	25	None	None	None	No	No exceedances.
Methyl iso butyl ketone	108-10-1	43	43	0.0045	0.26	0.26	6,400	None	None	None	No	No exceedances.
Methyl-Tert-Butyl Ether	1634-04-4	43	43	0.00089	0.052	0.052	0.10	None	None	None	No	No exceedances.
Nitrobenzene	98-95-3	18	18	0.035	1.7	1.7	160	None	None	None	No	No exceedances.
Styrene	100-42-5	43	43	0.00089	0.052	0.052	16,000	None	None	None	No	No exceedances.
tert-Butylbenzene	98-06-6	43	43	0.00089	0.11	0.052	8,000	None	None	None	No	No exceedances.
Trichlorofluoromethane	75-69-4	191	191	0.00053	10	0.052	24,000	None	None	None	No	No exceedances.
Vinyl acetate	108-05-4	43	43	0.0045	0.26	0.26	80,000	None	None	None	No	No exceedances.
Benzene, Toluene, Ethylbenzene, and Xylenes												
Toluene	108-88-3	87	87	0.0045	0.26	0.26	7.0	None	None	None	No	No exceedances.

Notes:

All SLs and results presented in this table are rounded to two significant figures.

BOLD Historical nondetect result exceeds SL.

RED/BOLD Non-detect result analyzed in 2020 exceeds SL.

RED/BOLD Chemical retained as a COPC.

1 This table includes data for all chemicals with soil SLs (developed in Table 5.4) that were not detected in site soil data.

2 The dataset includes all soil data collected from the locations shown on Figure 5.2.

3 Soil SLs are protective of the direct contact pathway.

4 Additional lines of evidence that can be used to eliminate chemicals as soil COPCs are as follows:

* The maximum reporting limit (i.e., maximum nondetect result) measured in recent (2020) data for the chemical is less than the SL; and

* Less than 10% of nondetect results exceed the SL, per WAC 173-340-740(7)(e)(ii).

5 Chemicals that were not detected in groundwater are eliminated as COPCs if they are not suspected of being present at the site based on site history and other knowledge, per WAC 173-340-720(9)(f)(v).

Abbreviations:

CAS Chemical Abstracts Service
COPC Chemical of potential concern
mg/kg Milligrams per kilogram
PCE Tetrachloroeth
PQL Practical quantitation limit
Site Ultra Custom Care Cleaners Site
SL Screening level
WAC Washington Administrative Code

Table 5.7
Groundwater Preliminary Cleanup Levels (µg/L)

Chemical [(1)]	CAS No.	Risk-Based Target CUL Development: Minimum MTCA A CUL [(2)]	Risk-Based Target CUL Development: Modified MTCA Method B Groundwater Vapor Intrusion SL [(3)]	Adjustment Factors: Median 2020 PQL [(4)]	Cleanup Level [(5)]	Human Health Endpoint
Total Metals						
Arsenic [(6)]	7440-38-2	5.0		3.3	5.0	Cancer
Chlorinated Volatile Organic Compounds						
Tetrachloroethene	127-18-4	5.0	73	0.20	5.0	Cancer
Trichloroethene	79-01-6	5.0	7.7	0.20	5.0	Cancer
cis-1,2-Dichloroethene	156-59-2	70		0.20	70	Noncancer
trans-1,2-Dichloroethene	156-60-5	100	1,300	0.20	100	Noncancer
Vinyl chloride	75-01-4	0.20	1.1	0.020	0.20	Cancer
Volatile Organic Compounds						
Chloroform	67-66-3	70	3.6	0.20	3.6	Noncancer
Hexachlorobutadiene	87-68-3		2.4	1.0	2.4	Cancer
Benzene, Toluene, Ethylbenzene, and Xylenes						
Benzene	71-43-2	5.0	7.3	0.20	5.0	Cancer

Notes:

All criteria presented in this table are rounded to two significant figures.
Blanks are intentional; no criteria exist.

1 Preliminary groundwater cleanup levels were developed for chemicals retained as groundwater COPCs in Tables 5.2 and 5.3.

2 The MTCA Method A CUL listed in this table for each chemical is the lowest criterion from among the following criteria: MTCA Method A groundwater criteria listed in WAC Table 720-1; Federal and State Maximum Contaminant Levels established in 40 CFR 141 and WAC 326-290-310, respectively; and Federal MCLGs for noncarcinogens (i.e., chemicals with a noncancer human health effect) established in 40 CFR 141 per WAC 173-340-720(3).

3 Criteria in this table are the lowest of the MTCA Method B vapor intrusion screening levels protective of cancer and noncancer endpoints for each chemical. Exposure assumptions have been adjusted to MTCA default values for commercial land use. Development and guidance for use of criteria protective of this pathway are described in Ecology's Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, as revised in 2019.

4 The PQL listed in this table is the median PQL achieved during the Data Gaps Field Investigation, which is generally consistent with the lab-reported PQLs listed in Table 4.3 of the DGI Work Plan (Floyd|Snider 2020a). The PQL is rounded to two significant digits.

5 The groundwater cleanup level is the lowest of the criteria presented in this table, after adjusting upward to the greater value between natural background and the PQL. Groundwater cleanup levels are protective of direct contact and vapor intrusion pathways.

6 Washington state groundwater natural background is 5 µg/L (WAC 173-340-900 Table 720-1).

Abbreviations:

CAS Chemical Abstracts Service
CFR Code of Federal Regulations
COPC Chemical of potential concern
CUL Cleanup level
Ecology Washington State Department of Ecology
µg/L Micrograms per liter
MCLG Maximum contaminant level goal
MTCA Model Toxics Control Act
PQL Practical quantitation limit
SL Screening level
WAC Washington Administrative Code

Table 5.8
Screening Evaluation to Identify Groundwater Chemicals of Concern (µg/L)

		Information About Dataset [2,3]					Information about Criteria and Detected Exceedances			Information about Non-Detect Results			Information about COPC Status	
Chemical [1]	CAS No.	Number of Results	Percent of Detected Results	Maximum Detected Result	Location of Maximum Detect	Date of Maximum Detect	Groundwater Cleanup Level [3,4]	Percent of Results that Exceed Criteria	Maximum Exceedance Factor [5]	Minimum Non-Detect Result	Maximum Non-Detect Result	Percent of Results that Exceed Criteria	Is Chemical a Groundwater COC? [6]	Rationale
Metals, Total [7]														
Arsenic	7440-38-2	28	46%	17	UCCMW-25	3/9/2020	5.0	39%	**3.3**	3.3	3.3	None	**Yes**	
Chlorinated Volatile Organic Compounds														
Tetrachloroethene	127-18-4	249	59%	810	PP-10	10/15/2013	5.0	24%	**160**	0.20	4.0	None	**Yes**	
Trichloroethene	79-01-6	242	29%	17	INJ-2	5/3/2016	5.0	3.3%	**3.4**	0.20	4.0	None	**Yes**	
		242	29%	17	UCCMW-8	3/10/2017	5.0	3.3%	**3.4**	0.20	4.0	None	**Yes**	
cis-1,2-Dichloroethene	156-59-2	242	40%	1,100	INJ-2	5/3/2016	70	3.7%	**16**	0.20	4.0	None	**Yes**	
trans-1,2-Dichloroethene	156-60-5	241	3.3%	4.7	UCCMW-18	5/3/2016	100	None	None	0.20	10	None	No	No exceedances
Vinyl chloride	75-01-4	242	21%	240	UCCMW-18	5/3/2016	0.20	18%	**1,200**	0.02	4.0	9%	**Yes**	
Volatile Organic Compounds														
Chloroform	67-66-3	210	11%	5.7	UCCB-9	3/23/2017	3.6	0.48%	**1.6**	0.20	**10**	1.9%	No	Maximum result <2 times the SL, less than 10% exceed.
Hexachlorobutadiene	87-68-3	206	None	None	None	None	2.4	None	None	0.20	**10**	2.9%	No	Maximum result <2 times the SL, less than 10% exceed.
Benzene, Toluene, Ethylbenzene, and Xylenes														
Benzene	71-43-2	60	1.7%	0.24	UCCMW-8	3/11/2020	5.0	None	None	0.20	2.0	None	No	No exceedances

Notes:

All screening levels and results presented in this table are rounded to two significant figures.

BOLD Non-detect result exceeds screening level.

RED/BOLD Chemical whose maximum detected result exceeds screening level.

RED/BOLD Chemical identified as COC.

1 This table includes only chemicals that were retained as COPCs in Table 5.3.

2 The dataset includes all groundwater data collected from permanent wells collected after March 30, 2016. For arsenic, only data collected from groundwater monitoring wells after March 30, 2016 was included. For all other chemicals, the dataset was defined as follows:
- Within the plume boundary defined in the DGI Work Plan Tech Memo, groundwater data from temporary wells and direct push borings collected on or after March 30, 2016 was included.
- Outside the plume boundary but within the area of investigation defined in the DGI Work Plan, groundwater data from temporary wells and direct push borings collected on or after January 1, 2009 was included.

3 Groundwater results and CULs are rounded to two significant figures.

4 Groundwater cleanup levels were developed in Table 5.5 and are protective of drinking water and vapor intrusion pathways.

5 The exceedance factor is calculated by dividing the maximum detected result by the CUL. It is rounded to two significant figures.

6 Chemicals are eliminated as COCs if following two criteria in WAC 173-340-720(9)(e)(i-ii) are met:
(1) the exceedance factor does not exceed 2, and
(2) less than 10% of samples exceed the SL.

7 Both total and dissolved metals data were collected during historical sampling events. Only total metals results are presented in this table; groundwater cleanup levels developed in Table 5.7 are applicable to the total metals fraction.

Abbreviations:

CAS Chemical Abstracts Service
COC Chemical of concern
CUL Cleanup level
DGI Data Gaps Investigation
µg/L Micrograms per liter
MTCA Model Toxics Cleanup Act
SL Screening level
WAC Washington Administrative Code

Table 5.10
Summary of Key Properties of Groundwater Chemicals of Concern

Chemical [1]	CAS No.	Description	Dates of Potential Use at Site	Potential Site Sources	Groundwater Mobility [2]				Behavior in Environment	Response to Interim Measures
					Density	Solubility (mg/L)	Vapor Pressure (mm Hg at 25 °C)	Classification		
Metals										
Arsenic	7440-38-2	Naturally Occurring Metal	Not applicable; not used in operations	Bioinjection interim measures	NA	NA	NA	Dependent on groundwater properties; can be highly soluble and mobile.	Arsenic naturally occuring in soil is solubilized under reducing geochemical conditions. Reducing conditions are characterized by ORP < -100 mV and DO < 0.5 mg/L.	Solubilized in groundwater surrounding injections in reversible process.
Chlorinated Volatile Organic Compounds										
Tetrachloroethene	127-18-4	Chlorinated Solvents	1950s to 2012	Release from dry cleaning operations followed by degradation	1.62	200	18.5	Not soluble in water. High mobility.	Does not sorb to soil. When in dissolved phase, moves in the direction of groundwater flow and sinks through soil and groundwater until confining layer is reached. Will turn to vapor in the vadose zone above a dissolved phase plume.	Did not respond to treatment by chemical oxidation. Responded to treatment by chemical reduction and bioaugmentation under sulfate reducing, anaerobic conditions. Slowly degrades via natual processes (e.g., volatilization, biological degradation, abiotic degradation).
Trichloroethene	79-01-6		1950s to 2012; unlikely to have been used in significant quantities based on relatively low frequency and magnitude of exceedance in soil and groundwater		1.46	1,100	69	Sparingly soluble in water. High mobility.		
cis-1,2-Dichloroethene	156-59-2	Degradation Products of PCE and TCE	Not applicable; not used in operations		1.28	3,500	200	Slightly soluble in water. High mobility.	Does not sorb to soil. Moves in the direction of groundwater flow and sinks through soil and groundwater until confining layer is reached. Will turn to vapor in the vadose zone above a dissolved	
trans-1,2-Dichloroethene	156-60-5				1.28	6,300	331	Slightly soluble in water. High mobility.		
Vinyl chloride	75-01-4				0.9	2,800	3,000	Slightly soluble in water. High mobility.	Does not sorb to soil. Moves in the direction of groundwater flow. Will turn to vapor in the vadose zone above a shallow groundwater plume.	

Notes:

1 This table includes only analytes that were retained as COCs in Table 5.8.

2 Groundwater mobility and environmental behavior information is from February 2021 CLARC and the following sources:

U.S. Environmental Protection Agency. 2021. "Trichloroethylene (TCE) Chemistry and Behavior." Contaminated Site Clean-Up Information. < https://clu-in.org/contaminantfocus/default.focus/sec/Trichloroethylene_(TCE)/cat/Chemistry_and_Behavior/ >. Last accessed July 1, 2021.

PubChem. 2021a. "Tetrachloroethylene." Hazardous Substances Data Bank (HSDB). U.S. National Library of Medicine. < https://pubchem.ncbi.nlm.nih.gov/compound/31373 >. Last accessed July 1, 2021.

_____. 2021b. "Tetrachloroethylene." Hazardous Substances Data Bank (HSDB). U.S. National Library of Medicine. < https://pubchem.ncbi.nlm.nih.gov/compound/31373 >. Last accessed July 1, 2021.

_____. 2021c. "cis-1,2-Dichloroethylene." Hazardous Substances Data Bank (HSDB). U.S. National Library of Medicine. < https://pubchem.ncbi.nlm.nih.gov/compound/643833 >. Last accessed July 1, 2021.

_____. 2021d. "trans-1,2-Dichloroethylene." Hazardous Substances Data Bank (HSDB). U.S. National Library of Medicine. < https://pubchem.ncbi.nlm.nih.gov/compound/638186 >. Last accessed July 1, 2021.

_____. 2021e. "Vinyl chloride." Hazardous Substances Data Bank (HSDB). U.S. National Library of Medicine. < https://pubchem.ncbi.nlm.nih.gov/compound/6338 >. Last accessed July 1, 2021.

Abbreviations:

°C Degrees Celcius
CAS Chemical Abstracts Service
CLARC Cleanup Levels and Risk Calculation
COC Chemical of concern
DO Dissolved oxygen
mg/L Milligrams per liter
mV Millivolts
NA Not applicable
ORP Oxidation-reduction potential
PCE Tetrachloroethylene
TCE Trichloroethylene

Table 5.11
Soil Preliminary Cleanup Levels (mg/kg)

Chemical [1]	CAS No.	Protection of Human Health and the Environment: MTCA Method A Unrestricted Land Use [2]	Protection of Human Health and the Environment: MTCA Method A CUL Basis [2]	Protection of Human Health and the Environment: Is Chemical a Groundwater COC? [3]	Protection of Human Health: Minimum MTCA Method B Criterion [4]	Protection of Vapor Intrusion: Ecology Vapor Intrusion Soil Threshold [5]	Adjustment Factor: PQL [6]	Soil Preliminary CUL [7]	Point of Compliance
Chlorinated Volatile Organic Compounds									
Tetrachloroethene	127-18-4	0.050	Protection of Groundwater [8]	Yes	480		0.0011	0.050	All depths
Trichloroethene	79-01-6	0.030	Protection of Groundwater [8]	Yes	12		0.0011	0.030	All depths
cis-1,2-Dichloroethene	156-59-2				160		0.0011	160	0–15 feet bgs
trans-1,2-Dichloroethene	156-60-5				1,600		0.0011	1,600	0–15 feet bgs
Vinyl chloride	75-01-4			Yes	0.67		0.000053	0.67	0–15 feet bgs
Volatile Organic Compounds									
Methylene chloride	75-09-2	0.020	Direct Contact	No	480		0.0053	480	0–15 feet bgs
Benzene, Toluene, Ethylbenzene, and Xylenes									
Benzene	71-43-2	0.030	Protection of Groundwater [8]	No	18	10	0.0011	10	0–6 feet bgs but applied from 0–15 feet bgs for protection of human health via direct contact
Ethylbenzene	100-41-4	6.0	Protection of Groundwater [8]	No	8,000		0.0011	8,000	0-15 feet bgs
Total Petroleum Hydrocarbons									
Gasoline-Range Organics	GRO	30	Protection of Groundwater [9]	No			24	30	All depths
Diesel- and Oil-Range Organics	DRO+ORO	2,000	Residual Saturation	No			61	2,000	All depths

Notes:

All screening levels presented in this table are rounded to two significant figures.

Blanks are intentional; no criteria exist.

1 Soil preliminary CULs were developed for chemicals in analyte classes retained as COPCs in the DGI Work Plan (Floyd|Snider 2020a).

2 MTCA Method A Soil Criteria for unrestricted land use are from WAC Table 740-1. WAC Table 740-1 documents the basis of each criterion in footnote tables.

3 Groundwater COCs are identified in Table 5.8. If a chemical is not a groundwater COC, an empirical demonstration is used to show that measured soil concentrations will not cause an exceedance of groundwater CULs, consistent with WAC 173-340-747(3)(f) and WAC 173-340-747(9)(b).

4 When MTCA Method A criteria are not available or when MTCA Method A criteria were developed for protection of groundwater, the criterion in this table is the lowest of MTCA Method B soil criteria protective of cancer and noncancer endpoints for that chemical. MTCA Method B soil criteria are consistent with Ecology's February 2021 CLARC data tables.

5 Exposure factors used in MTCA Method B vapor intrusion equations (WAC Eq. 750-1 and 750-2) were modified to reflect commercial land use exposure consistent with current and future land use assumptions as allowed by WAC 173-340-708(10)(b)(i). Exposure factors are listed in Appendix C. Threshold values are from Attachment B of Ecology's vapor intrusion Implementation Memorandum No. 14 (Ecology 2016). In accordance with Ecology's vapor intrusion Implementation Memorandum No. 18 (Ecology 2018b), MTCA Method A CULs for total petroleum hydrocarbons are also protective of the vapor intrusion pathway and separate preliminary CULs were not developed for total petroleum hydrocarbons.

6 The PQL listed in this table is the median PQL achieved during the DGI field investigation, which is generally consistent with the laboratory-reported PQLs listed in Table 4.3 of the DGI Work Plan (Floyd|Snider 2020a). The PQL is rounded to two significant digits.

7 The preliminary soil CUL is the lowest of the criteria presented in this table that is protective of all active and potentially active pathways. The point of compliance where the preliminary CUL applies is listed in the table and was determined consistent with WAC 173-340-740(6).

8 Criteria based on protection of groundwater for drinking water use were calculated using the procedures described in WAC 173-340-747(4).

9 Criteria based on protection of groundwater for drinking water use were calculated using the procedures described in WAC 173-340-747(6).

Abbreviations:

bgs Below ground surface
CAS Chemical Abstracts Service
CLARC Cleanup Levels and Risk Calculation
COPC Chemical of potential concern
CUL Cleanup level
DGI Data Gaps Investigation
Ecology Washington State Department of Ecology
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
PQL Practical quantitation limit
WAC Washington Administrative Code

Table 5.12
Screening Evaluation to Identify Soil Chemicals of Concern (mg/kg)

		Information About Dataset [(2)]					Information about Screening Level and Detected Exceedances				Information about Non-Detect Results					Information about COPC Status	
				Maximum Detected Result													
Chemical [(1)]	CAS No.	Number of Results	Percent of Detected Results	Result Value	Location	Depth	Soil Preliminary CUL [(3)]	Number of Results That Exceed	Percent of Results That Exceed	Maximum Exceedance Factor [(4)]	Number of Non-Detect Results	Minimum Non-Detect Result	Maximum Non-Detect Result	Max 2020 Non-Detect Result	Percent of Results that Exceed Criteria	Is Chemical a Soil COPC? [(5)]	Rationale
Protection of Direct Contact: Soil POC from 0–15 feet bgs																	
Chlorinated Volatile Organic Compounds																	
cis-1,2-Dichloroethene	156-59-2	264	4.5%	0.034	CDM-B5	8–8 ft	160	None	None	None	252	0.00053	0.052	0.052	None	No	No exceedances.
trans-1,2-Dichloroethene	156-60-5	264	None	NA	NA	NA	1,600	None	None	None	264	0.00053	0.052	0.052	None	No	No exceedances.
Vinyl chloride	75-01-4	264	1.1%	0.0024	ESS-B2	6–7 ft	0.67	None	None	None	261	0.000045	0.050	0.050	None	No	No exceedances.
Volatile Organic Compounds																	
Methylene chloride	75-09-2	264	1.1%	0.52	EAIa-B3	5–5 ft	0.020	2	1%	**26**	261	0.0026	0.50	0.50	36%	No	No exceedances.
Benzene, Toluene, Ethylbenzene, and Xylenes																	
Benzene	71-43-2	77	5.2%	2.3	UCCMW-36D	2–3 ft	0.030	1	1%	**77**	73	0.00089	0.027	0.027	None	No	No exceedances.
Ethylbenzene	100-41-4	77	2.6%	14	UCCMW-36D	2–3 ft	6.0	1	1%	2.3	75	0.00089	0.13	0.13	None	No	No exceedances.
Protection of Groundwater: POC Throughout Site Soil																	
Chlorinated Volatile Organic Compounds																	
Tetrachloroethene	127-18-4	281	39%	0.21	EAIb-B15	3–3 ft	0.050	7	2.5%	**4.2**	172	0.00053	0.052	0.052	**0.36%**	**Yes**	Maximum result >2x CUL.
Trichloroethene	79-01-6	264	6.4%	0.013	PSD-B3	6–7 ft	0.030	None	None	None	247	0.00053	0.052	**0.052**	**0.76%**	No	Maximum result <2 times the screening level, less than 10% exceed.
Total Petroleum Hydrocarbons																	
Gasoline-Range Organics	GRO	61	6.6%	450	UCCMW-36D	2–3 ft	30	1	1.6%	**15**	57	1.5	71	71	**3.3%**	**Yes**	Maximum result >2x CUL.
Diesel- and Oil-Range Organics	DRO+ORO	53	36%	3,590	UCCMW-36D	2–3 ft	2,000	2	3.8%	**1.8**	34	53	250	250	None	No	Maximum result <2 times the screening level, less than 10% exceed.

Notes:

All screening levels and results presented in this table are rounded to two significant figures.

BOLD Non-detect result exceeds soil preliminary CUL.

RED/BOLD Chemical whose maximum detected result exceeds the preliminary CUL that was not identified as a COPC.

RED/BOLD Chemical identified as a COC.

1 This table includes only chemicals that were identified as COPCs in soil in Tables 5.5 and 5.6.

2 The dataset includes all soil data collected on or after January 1, 2009, from the study area. If the basis of the soil dataset is protection of human health via direct contact, only soil data collected within the 0–15 feet bgs interval are compared to the preliminary CUL. If the basis of the CUL is protection of groundwater, soil data collected from any depth are compared to the preliminary CUL.

3 Soil preliminary CULs were developed in Table 5.11 and are protective of human health, ecological receptors, and the environment.

4 The exceedance factor is calculated by dividing the maximum detected result by the screening level. It is rounded to two significant figures.

5 Chemicals are eliminated as COCs if the following two criteria in WAC 173-340-740(7)(e)(i-ii) are met: (1) the exceedance factor does not exceed 2, and (2) less than 10% of samples exceed the preliminary CUL.

Abbreviations:

bgs Below ground surface
CAS Chemical Abstracts Service
COC Chemical of concern
COPC Chemical of potential concern
CUL Cleanup level
ft Feet
mg/kg Milligrams per kilogram
WAC Washington Administrative Code

Table 6.1
Groundwater Data for Chemicals of Potential Concern (µg/L) (1)

				Metals	cVOCs					VOCs		BTEX
			Analyte	Arsenic (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Chloroform	Hexachloro-butadiene	Benzene
			Is Chemical a COC or COPC? (3)	COC	COC	COC	COC	COPC	COC	COPC	COPC	COPC
			Groundwater Cleanup Level (4)	5.0	5.0	5.0	70	100	0.20	4.0	2.0	5.0
Location	Location Information (5)	Depth Interval	Sample Date									
Groundwater Monitoring Well Results												
Shallow Aquifer Zone Wells (6)												
BB-2	Second Row	9–19	5/5/2016		**73**	0.40 U	0.40 U	0.40 U	***0.40 U***	0.40 U	0.40 U	
			8/11/2016		**46**	0.44	1.2	0.20 U	**0.68**	0.20 U	0.20 U	
			11/14/2016		**70**	0.40 U	0.40 U		***0.40 U***			
			3/10/2017		**66**	0.40 U	3.7	0.40 U	***0.40 U***	0.40 U	0.40 U	
			3/11/2020	3.3 U	**80**	0.97	0.60	0.40 U	0.046	0.40 U	2.0 U	0.40 U
BB-3	Upgradient of Source Area Row	10–20	8/10/2016		0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			3/7/2017		0.32	0.20 U	0.65	0.20 U	0.20 U	0.20 U	0.20 U	
BI-3	Downgradient of First Row	5–10	3/8/2017		0.92	0.90	4.0	0.20 U	**0.74**	0.20 U	0.20 U	
			3/9/2020	3.3 U	1.1	0.39	2.4	0.20 U	**0.52**	0.20 U	1.0 U	0.20 U
BLMW-10	Downgradient of Third Row	5–10	3/9/2020	3.5	0.20 U	0.29	1.0	0.20 U	0.024	0.20 U	1.0 U	0.20 U
INJ-2	Source Area Row	8–23	5/3/2016		**50**	**17**	**1,100**	10 U	**11**	***10 U***	***10 U***	
			8/12/2016		**100**	3.5	45	0.40 U	***0.40 U***	0.40 U	0.40 U	
			11/14/2016		**270**	**12**	**190**	1.0 U	**5.7**	1.0 U	1.0 U	
			3/13/2017		**25**	2.0	34	0.22	**2.0**	0.20 U	0.20 U	
RMW-4	Downgradient Site	15–25	6/29/2016		3.6	0.46	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			12/21/2016		4.3	0.51	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCMW-1	Source Area Row	4–14	5/4/2016		3.7	2.3	**310**	2.0 U	**11**	2.0 U	2.0 U	
			8/12/2016		1.0 U	1.0 U	**190**	1.0 U	**5.3**	1.0 U	1.0 U	
			11/11/2016		1.0 U	1.0 U	**110**	1.0 U	**21**	1.0 U	1.0 U	
			3/13/2017		0.54	0.40 U	41	0.40 U	**12**	0.40 U	0.40 U	
UCCMW-5	Downgradient of Source Area Row	10–20	5/4/2016		**14**	0.54	14	0.20 U	0.20 U	0.20 U	0.20 U	
			8/10/2016		**14**	0.61	6.2	0.20 U	0.20 U	0.20 U	0.20 U	
			11/14/2016		**6.3**	0.23	0.98	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2017		5.0	0.24	1.4	0.20 U	0.20 U	0.20 U	0.20 U	
			3/10/2020	3.3 U	1.4	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-6	West of Second Row	5–15	8/12/2016		3.6	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			3/8/2017		2.9	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCMW-7	First Row	8–18	5/5/2016		**28**	0.20 U	0.35	0.20 U	0.20 U	0.56	0.20 U	
			8/10/2016		0.87	0.20 U	3.9	0.20 U	**0.23**	0.20 U	0.20 U	
			11/14/2016		**9.9**	2.4	1.7	0.20 U	**0.30**	0.21	0.20 U	
			3/7/2017		**14**	4.6	6.8	0.20 U	**0.35**	0.20 U	0.20 U	
			3/10/2020	**9.0**	1.4	1.3	13	0.20 U	**1.9**	0.20 U	1.0 U	0.20 U
UCCMW-8	Second Row	5–15	5/5/2016		**96**	0.79	0.51	0.40 U	***0.40 U***	0.40 U	0.40 U	
			8/10/2016		1.3	0.20 U	1.0	0.20 U	0.20 U	0.20 U	0.20 U	
			11/11/2016		1.7	**6.6**	16	0.20 U	**0.45**	0.20 U	0.20 U	
			3/10/2017		**10**	**17**	6.9	0.20 U	**0.40**	0.20 U	0.20 U	
			3/11/2020	3.8	2.2	0.50	0.55	0.20 U	0.020 U	0.20 U	1.0 U	0.24
UCCMW-9	West of Second Row	5–15	8/12/2016		**6.3**	0.52	0.86	0.20 U	0.20 U	0.20 U	0.20 U	
			3/8/2017		0.38	0.27	0.66	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2020	**6.3**	0.20 U	0.20 U	0.99	0.20 U	0.15	0.20 U	1.0 U	0.20 U
UCCMW-10	Downgradient of Second Row	5–15	8/11/2016		3.1	0.36	0.42	0.20 U	**0.26**	0.20 U	0.20 U	
			3/9/2017		**14**	0.20 U	1.8	0.20 U	0.20 U	0.20 U	0.20 U	
			3/10/2020	3.3 U	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-15	Upgradient of Source Area Row	9–19	2/13/2018		1.8	0.25	1.5	0.20 U	0.20 U	0.27	0.20 U	
UCCMW-16	Upgradient of Source Area Row	9–19	5/3/2016		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			8/11/2016		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			11/14/2016		0.22	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			3/13/2017		0.86	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCMW-17	Upgradient of Source Area Row	10–20	5/3/2016		4.9	0.22	12	0.20 U	0.20 U	0.20 U	0.20 U	
			8/11/2016		0.81	0.20 U	0.78	0.20 U	0.20 U	0.20 U	0.20 U	
			11/10/2016		**35**	3.6	44	0.32	0.20 U	0.20 U	0.20 U	
			3/13/2017		**16**	3.4	**250**	2.0 U	**7.0**	2.0 U	2.0 U	
			3/11/2020	3.3 U	**21**	1.2	26	0.21	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-18	Source Area Row	10–20	5/3/2016		2.0 U	2.0 U	**390**	4.7	**240**	2.0 U	2.0 U	
			8/12/2016		0.85	0.20 U	4.4	0.31	**4.6**	0.20 U	0.20 U	
			11/10/2016		**42**	2.0	15	2.8	**8.7**	0.20 U	0.20 U	
			3/13/2017		4.1	1.7	39	2.4	**14**	0.40 U	0.40 U	
			3/11/2020	**6.0**	**130**	1.7	19	1.0 U	**2.8**	1.0 U	***5.0 U***	1.0 U
				5.8	**130**	1.9	19	1.0 U	**2.5**	1.0 U	***5.0 U***	1.0 U
UCCMW-19	Source Area Row	10–20	5/4/2016		4.0 U	4.0 U	**850**	4.0 U	**13**	***4.0 U***	***4.0 U***	
			8/12/2016		2.0 U	2.0 U	**240**	2.0 U	**2.6**	2.0 U	2.0 U	
			11/10/2016		0.20 U	0.20 U	29	0.20 U	**19**	0.20 U	0.20 U	
			3/9/2017		0.60	0.48	3.3	0.20 U	**0.65**	0.20 U	0.20 U	
UCCMW-20	Downgradient of First Row	8–18	5/5/2016		**23**	**8.3**	63	0.40 U	***0.40 U***	0.40 U	0.40 U	
			8/11/2016		**16**	3.2	26	0.20 U	0.20 U	0.20 U	0.20 U	
			11/29/2016		**6.1**	0.88	2.3	0.20 U	0.20 U	0.20 U	0.20 U	
			3/8/2017		5.0	0.64	0.57	0.20 U	0.20 U	0.20 U	0.20 U	
UCCMW-21	Source Area Row	12–22	5/5/2016		**24**	0.48	0.25	0.20 U	0.20 U	0.20 U	0.20 U	
			8/11/2016		**20**	0.35	2.3	0.20 U	0.20 U	0.20 U	0.20 U	
			11/29/2016		**7.8**	0.70	9.5	0.20 U	0.20 U	0.20 U	0.20 U	
			3/8/2017		**5.4**	0.77	5.6	0.20 U	**0.68**	0.20 U	0.20 U	
			3/9/2020	**5.5**	2.8	1.4	0.61	0.20 U	**0.25**	0.20 U	1.0 U	0.20 U
UCCMW-23	West of Second Row	8–18	8/12/2016		4.3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2017		4.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCMW-24	First Row	8–18	8/11/2016		2.8	0.20 U	0.90	0.20 U	0.20 U	0.20 U	0.20 U	
			3/7/2017		1.0	0.97	1.2	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2020	**11**	0.20 U	0.20 U	0.30	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U

Table 6.1
Groundwater Data for Chemicals of Potential Concern (µg/L) [1]

				Metals	cVOCs					VOCs		BTEX
			Analyte	Arsenic [2]	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Chloroform	Hexachloro-butadiene	Benzene
			Is Chemical a COC or COPC? [3]	COC	COC	COC	COC	COPC	COC	COPC	COPC	COPC
			Groundwater Cleanup Level [4]	5.0	5.0	5.0	70	100	0.20	4.0	2.0	5.0
Location	Location Information [5]	Depth Interval	Sample Date									
Groundwater Monitoring Well Results (cont.)												
Shallow Aquifer Zone Wells [6] (cont.)												
UCCMW-25	First Row	8–18	5/5/2016		**7.8**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			8/11/2016		**11**	0.73	3.9	0.20 U	0.20 U	0.20 U	0.20 U	
			11/29/2016		**8.1**	1.9	2.6	0.20 U	0.20 U	0.20 U	0.20 U	
			3/7/2017		**5.6**	1.0	12	0.20 U	**0.90**	0.20 U	0.20 U	
			3/9/2020	**17**	1.1	0.88	3.8	0.20 U	**0.75**	0.20 U	1.0 U	0.20 U
UCCMW-26	Third Row	5–15	5/5/2016		0.20 U	0.21	8.9	0.20 U	**4.1**	0.20 U	0.20 U	
			8/10/2016		0.20 U	0.20 U	0.85	0.20 U	**0.52**	0.20 U	0.20 U	
			11/11/2016		0.20 U	0.20 U	0.95	0.20 U	**0.38**	0.20 U	0.20 U	
			3/13/2017		0.20 U	0.40	2.4	0.30	**0.94**	0.20 U	0.20 U	
UCCMW-27	Third Row	5–15	5/5/2016		**16**	0.49	0.22	0.20 U	0.20 U	0.20 U	0.20 U	
			8/10/2016		**6.3**	0.55	0.48	0.20 U	0.20 U	0.20 U	0.20 U	
			11/11/2016		4.0	1.5	1.2	0.20 U	0.20 U	0.20 U	0.20 U	
			3/13/2017		1.1	0.87	1.1	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2020	**8.8**	0.20 U	0.21	3.1	0.20 U	0.094	0.20 U	1.0 U	0.20 U
UCCMW-29	Central Plume	5–15	7/13/2020	3.3 U	**9.2**	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-32	West of Third Row	15–25	7/13/2020	3.3 U	**8.6**	2.9	3.2	0.20 U	0.043	0.20 U	1.0 U	0.20 U
Deep Aquifer Zone Wells [6]												
UCCMW-4D	Source Area	35–40	8/12/2016		0.47	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
			3/9/2017		0.21	0.20 U	0.30	0.20 U	0.20 U	0.20 U	0.20 U	
			3/11/2020	**9.1**	0.20 U	0.20 U	0.21	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-28D	Northeast of Plume	40–50	8/4/2020	3.3 U	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-29D	Eastern Boundary	34–44	7/13/2020	**5.2**	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-30D		26–36	7/14/2020	3.3 U	2.2	0.20 U	0.20 U	0.20 U	0.067	0.20 U	1.0 U	0.20 U
UCCMW-31D	Central Plume	18–28	7/13/2020	3.3 U	**25**	0.20 U	6.6	0.20 U	**0.24**	0.20 U	1.0 U	0.20 U
UCCMW-32D	Western Boundary	30–40	7/13/2020	3.3 U	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-33D		49–59	7/21/2020	**5.8**	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-34D	Downgradient Plume	35–50	7/21/2020	3.3 U	**18**	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-35D	West of Plume	30–40	7/21/2020	3.3 U	0.20 U	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U	1.0 U	0.20 U
UCCMW-36D	Central Plume	15–30	7/13/2020	3.3 U	**24**	0.20 U	20	0.20 U	**0.92**	0.20 U	1.0 U	0.20 U
				3.3 U	**24**	0.20 U	19	0.20 U	**0.93**	0.20 U	1.0 U	0.20 U
Direct Push Groundwater Results—Not In Plume												
Results Analyzed On or After March 30, 2016												
EAIa-B1	Shallow	19–23	5/3/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIa-B2	Shallow	19–23	5/3/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIa-B3	Shallow	19–23	5/3/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIa-B4	Shallow	19–23	5/3/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIa-B5	Shallow	24–28	5/3/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIa-B6	Shallow	24–28	5/4/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIa-B7	Shallow	20–24	5/4/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIa-B8	Shallow	18–20	5/4/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIa-B9	Shallow	11–15	5/4/2016									1.0 U
EAIa-B10	Shallow	16–20	5/4/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIa-B11	Shallow	11–15	5/4/2016									1.0 U
EAIb-B1	Shallow	15–20	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B2	Shallow	15–20	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B3	Shallow	15–20	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B4	Shallow	12–17	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIb-B5	Shallow	13–18	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B6	Shallow	13–18	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B7	Shallow	15–20	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B8	Shallow	13–18	5/10/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIb-B9	Shallow	13–18	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B10	Shallow	13–18	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B11	Shallow	15–20	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B12	Shallow	13–18	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIb-B13	Shallow	13–18	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B14	Shallow	13–18	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B15	Shallow	15–20	5/11/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B16	Shallow	15–20	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B17	Shallow	15–20	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B18	Shallow	13–18	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B19	Shallow	13–18	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			1.0 U
EAIb-B20	Shallow	15–20	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B21	Shallow	15–20	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
EAIb-B22	Shallow	15–20	5/12/2016		1.0 U	1.0 U	1.0 U	1.0 U	0.20 U			
UCCB-1	Shallow	9–14	3/21/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	23–28			0.20 U	0.20 U	3.7	0.20 U	0.20 U	0.43	0.20 U	
	Deep	35–40			0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-3	Shallow	1–6	3/24/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	25–30			4.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	35–40			0.45	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-5	Shallow	10–20	3/22/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.1	0.20 U	
	Deep	29–34			4.2	0.20 U	0.20 U	0.20 U	0.20 U	0.43	0.20 U	
	Deep	40–45			1.5	0.20 U	0.20 U	0.20 U	0.20 U	1.6	0.20 U	

Table 6.1
Groundwater Data for Chemicals of Potential Concern (µg/L) [(1)]

				Metals	cVOCs					VOCs		BTEX
			Analyte	Arsenic [(2)]	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Chloroform	Hexachloro-butadiene	Benzene
			Is Chemical a COC or COPC? [(3)]	COC	COC	COC	COC	COPC	COC	COPC	COPC	COPC
			Groundwater Cleanup Level [(4)]	5.0	5.0	5.0	70	100	0.20	4.0	2.0	5.0
Location	Location Information [(5)]	Depth Interval	Sample Date									
Direct Push Groundwater Results—Not In Plume (cont.)												
Results Analyzed On or After March 30, 2016 (cont.)												
UCCB-9	Shallow	15–20	3/22/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.2	0.20 U	
	Deep	28–33			0.61	0.20 U	0.20 U	0.20 U	0.20 U	0.74	0.20 U	
	Deep	39–44			0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	**5.7**	0.20 U	
UCCB-10	Shallow	7–12	3/20/2017		1.1	1.3	3.1	0.20 U	0.20	0.20 U	0.20 U	
	Deep	22–27			0.20 U	0.89	9.0	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	35–40			0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
Results Analyzed Between January 1, 2009 and March 30, 2016												
BB-1	Shallow	10–20	5/19/2009		0.90	0.20 U	0.20 U	0.20 U	0.20 U	0.25	0.20 U	0.20 U
CDM-B1	Shallow	6–6	4/6/2009		**20**	1.4	1.6	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B7	Shallow	9–9	4/1/2009		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B8	Shallow	7–7	4/7/2009		0.37	0.20 U	0.20 U	0.20 U	0.20 U	0.22	0.20 U	
CDM-B20	Shallow	8–12	6/27/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B21	Shallow	15–16	6/27/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	2.6	0.20 U	
CDM-B24	Shallow	9–12	6/27/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B25	Shallow	11–13	6/27/2011		0.40	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B26	Shallow	6–8	6/27/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
CDM-B27	Shallow	14–19	6/28/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.82	0.20 U	
CDM-B34	Shallow	5–8	5/10/2013		2.2	0.31	0.33	0.20 U	0.20 U	0.20 U	0.20 U	
		8–11			2.2	0.33	0.37	0.20 U	0.20 U	0.20 U	0.20 U	
GM-1	Shallow	8–11	5/19/2009		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
GM-2	Shallow	10–12	5/19/2009									1.0 U
GM-4	Shallow	6–9	5/19/2009									1.0 U
GM-5	Shallow	8–11	5/19/2009		0.20 U	0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
GM-6	Shallow	9–12	5/19/2009		0.20 U	0.20 U	0.38	0.20 U	**0.28**	0.20 U	0.20 U	0.20 U
HWA-CH-B3	Shallow	16–17	9/30/2011		3.6	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
HWA-CH-B4	Shallow	17–20	9/30/2011		0.30	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
HWA-CH-B8	Shallow	8–11	9/30/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
HWA-CH-B9	Shallow	8–8	9/30/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
HWA-CH-B11	Shallow	8–12	9/30/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
HWA-CH-B12	Shallow	20–24	9/30/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
HWA-CH-B13	Shallow	20–24	9/30/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
Lot5-1	Shallow	10–22	8/3/2015		1.6							
Lot5-2	Shallow	10–22	8/3/2015		0.63							
Lot5-5	Shallow	10–22	8/3/2015		**5.1**							
Lot5-6	Shallow	10–22	8/3/2015		1.8							
Lot8-1	Shallow	10–22	8/4/2015		2.1							
Lot8-3	Shallow	10–22	8/4/2015		0.43							
Lot8-4	Shallow	10–22	8/4/2015		0.90							
PP-2	Shallow	7–12	10/14/2013		3.7	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-3	Shallow	7–12	10/14/2013		2.8	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-4	Shallow	7–12	10/14/2013		0.69	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-5	Shallow	7–12	10/14/2013		2.6	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-6	Shallow	7–12	10/14/2013		1.0	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-10	Shallow	7–12	10/15/2013		**420**	**6.3**	4.0 U	4.0 U	***4.0 U***	***4.0 U***	***4.0 U***	
		7–12			**810**	**10**	4.0 U	4.0 U	***4.0 U***	***4.0 U***	***4.0 U***	
PP-12	Shallow	7–12	10/15/2013		0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
PP-13	Shallow	7–12	10/15/2013		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
		7–12			0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
PP-15	Shallow	7–12	10/16/2013		0.61	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-16	Shallow	7–12	10/16/2013		0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-17	Shallow	7–12	10/16/2013		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-18	Shallow	7–12	10/16/2013		0.45	0.20 U	0.20 U	0.20 U	0.20 U	0.32	0.20 U	
PP-21	Shallow	7–12	10/17/2013		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-25	Shallow	11–16	10/17/2013		0.55	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-26	Shallow	11–16	10/18/2013		0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-27	Shallow	11–16	10/18/2013		1.1	0.20 U	0.20 U	0.20 U	0.20 U	0.36	0.20 U	
PP-28	Shallow	11–16	10/18/2013		0.24	0.20 U	0.20 U	0.20 U	0.20 U	0.31	0.20 U	
PP-29	Shallow	11–16	10/18/2013		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
PP-30	Shallow	11–16	10/18/2013		2.3	0.20 U	0.20 U	0.20 U	0.20 U	0.32	0.20 U	
PSD-B2	Shallow	7–12	12/15/2011		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
PSD-B5	Shallow	8–8	12/15/2011		1.3	0.59	4.1	0.20 U	**2.0**	0.20 U	0.20 U	0.20 U
Px-SB01	Shallow	18–18	4/1/2010									1.0 U
Px-SB02	Shallow	18–18	3/31/2010									1.0 U
Px-SB01	Shallow	18–18	4/1/2010									1.0 U
Px-SB03	Shallow	18–18	3/31/2010		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U

Table 6.1
Groundwater Data for Chemicals of Potential Concern (µg/L) (1)

				Metals	cVOCs					VOCs		BTEX
			Analyte	Arsenic (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Chloroform	Hexachloro-butadiene	Benzene
			Is Chemical a COC or COPC? (3)	COC	COC	COC	COC	COPC	COC	COPC	COPC	COPC
			Groundwater Cleanup Level (4)	5.0	5.0	5.0	70	100	0.20	4.0	2.0	5.0
Location	Location Information (5)	Depth Interval	Sample Date									
Direct Push Groundwater Results—In Plume												
FB-9	Shallow	22–22	6/22/2016		0.86	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.25 U	
	Deep	27–27			**8.7**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.25 U	
	Deep	32–32			**5.8**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.25 U	
UCCB-2	Shallow	7–12	4/5/2017		2.6	0.20 U	0.37	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	22–27			**35**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	35–40			**21**	0.20 U	0.41	0.20 U	0.20 U	0.48	0.20 U	
UCCB-4	Shallow	7–12	4/5/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Shallow	18–23			**14**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	33–38			**9.3**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-8	Shallow	23–28	3/27/2017		**64**	0.22	1.2	0.20 U	**0.55**	0.20 U	0.20 U	
	Deep	35–40			**21**	0.20 U	0.25	0.20 U	0.20 U	0.66	0.20 U	
UCCB-11	Shallow	15–20	2/13/2018		2.8	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-12	Shallow	15–20	2/13/2018		2.9	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-13	Shallow	15–20	2/13/2018		4.3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-14	Shallow	16–21	2/13/2018		3.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
					3.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
	Deep	29–34			0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-15	Shallow	10–15	2/13/2018		**7.8**	0.20 U	0.22	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-16	Shallow	10–15	2/13/2018		1.5	0.35	18	0.20 U	**0.43**	0.20 U	0.20 U	
UCCB-17	Shallow	16–21	2/13/2018		2.0	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
UCCB-18	Shallow	15–20	2/13/2018		3.8	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	

Notes:

Results and CULs are rounded to two significant figures.

Italics Non-detect result exceeds CUL.

RED/BOLD Detected result exceeds CUL.

RED/BOLD 2020 result exceeds CUL.

Field duplicate result; not used to determine compliance relative to CUL.

1 The dataset includes all groundwater data collected from permanent wells after March 30, 2016. For arsenic, only data collected from groundwater monitoring wells after March 30, 2016, were included. For all other chemicals, the dataset was defined as follows:
- Within the plume boundary defined in the DGI Work Plan Tech Memorandum (Floyd|Snider 2020a), groundwater data from temporary wells and direct push borings collected on or after March 30, 2016, were included.
- Outside the plume boundary but within the area of investigation defined in the DGI Work Plan, groundwater data from temporary wells and direct push borings collected on or after January 1, 2009, was included.

2 Both total and dissolved metals data were collected during historical sampling events. Only total metals results are presented in this table; the groundwater CUL is applicable to the total metals fraction.

3 Groundwater COPCs were identified in Table 5.3. Groundwater COCs were identified in Table 5.8.

4 CULs were developed in Table 5.7.

5 For groundwater wells, location information is provided relative to bioinjection locations relative to the shallow aquifer zone and relative to plume boundaries in the deep aquifer zone. For groundwater samples from direct push borings, location information is provided relative to aquifer zone.

6 Shallow wells/borings are screened or completed between approximately 5–25 ft bgs and deep wells/borings are greater than approximately 25 ft. Depth is determined using the midpoint of the screened/completion depth.

Abbreviations:

bgs Below ground surface
BTEX Benzene, toluene, ethylbenzene, and xylenes
COC Chemical of concern
COPC Chemical of potential concern
CUL Cleanup level
cVOC Chlorinated volatile organic compound
DCE Dichloroethene
DGI Data Gaps Investigation
ft Feet
µg/L Micrograms per liter
PCE Tetrachloroethene
TCE Trichloroethene
VOC Volatile organic compound

Qualifier:

U Analyte not detected at the given reporting limit.

Table 6.2

Groundwater Conventionals and Field Parameter Data [1]

			Analyte Class	Conventionals								Dissolved Gases		
			Analyte	Dissolved Oxygen	Nitrate	ORP	pH	Sulfate	Sodium	Total Organic Carbon	Turbidity	Ethane	Ethene	Methane
			Units	mg/L	µg/L	mV	Standard Units	µg/L	µg/L	µg/L	NTU	µg/L	µg/L	µg/L
Location	Location Information [2]	Interval (ft bgs)	Sample Date											
Monitoring Wells														
Shallow Aquifer Zone Wells [3]														
BB-2	Second Row	9–19	5/5/2016		3,600			9,300	14,000	1,000 U		0.50 U	0.50 U	0.50 U
			8/11/2016		360			5,700	19,000	1,700		44 U	3.4 U	2,200
			11/14/2016					9,900	14,000	1,000 U		3.6 U	0.64 U	290
			3/10/2017		1,900			9,200	15,000	1,600		19 U	2.3 U	1,800
			3/11/2020	2.84		97.8	6.49				3.24	0.22 UJ	0.29 UJ	2.0 J
BB-3	Upgradient of Source Area	10–20	8/10/2016											
			3/7/2017											
BI-3	Downgradient of First Row	5–10	3/8/2017											
			3/9/2020	0.83		53.8	6.53				14.66			
BLMW-10	Downgradient of Third Row	5–10	3/9/2020	0.53		-9.5	6.49				1.92	0.22 UJ	0.29 UJ	150 J
RMW-4	Downgradient Site	15–25	6/29/2016											
			12/21/2016											
UCCMW-1	Source Area Row	4–14	5/4/2016		770			25,000 U	310,000	2,400,000		67 U	7.7	5,000
			8/12/2016		120			25,000 U	130,000	650,000		91 U	8.7 U	6,400
			11/11/2016		140			5,000 U	140,000	460,000		110 U	16 U	13,000
			3/13/2017		130			25,000 U	88,000	260,000		100 U	11 U	18,000
UCCMW-5	Downgradient of Source Area Row	10–20	5/4/2016		180			12,000	20,000	2,100		0.50 U	0.50 U	0.71
			8/10/2016											
			11/14/2016		310			11,000	8,800	1,500		0.50 U	0.50 U	0.58
			3/9/2017											
			3/10/2020	9.44		140.3	6.19				6.26	0.22 UJ	0.29 UJ	5.5 J
UCCMW-6	West of Second Row	5–15	8/12/2016											
			3/8/2017											
UCCMW-7	First Row	8–18	5/5/2016		2,800			110,000	15,000	9,500		0.50 U	0.50 U	0.50 U
			8/10/2016		50 U			9,400	14,000	9,500		32	3.2	2,400
			11/14/2016		90			23,000	14,000	4,000		14 U	1.4 U	1,200
			3/7/2017		130			30,000	16,000	6,400		21 U	2.3 U	2,000
			3/10/2020	0.53		-42.9	6.23				2.70	0.22 UJ	0.29 UJ	1,000 J
UCCMW-8	Second Row	5–15	5/5/2016		350			19,000	16,000	31,000		0.50 U	0.50 U	4.1
			8/10/2016		940			16,000	11,000	3,800		0.50 U	0.50 U	15
			11/11/2016		50 U			22,000	13,000	4,800		3.2 U	0.50 U	160
			3/10/2017		500			20,000	13,000	3,100		9.2 U	1.1 U	570
			3/11/2020	0.62		161.8	6.06				9.90	0.22 UJ	0.29 UJ	33 J
UCCMW-9	West of Second Row	5–15	8/12/2016											
			3/8/2017											
			3/9/2020	0.48		25.7	6.66				9.84			
UCCMW-10	Downgradient of Second Row	5–15	8/11/2016											
			3/9/2017											
			3/10/2020	0.74		58.1	5.98				134.00	0.22 UJ	0.29 UJ	8.0 J
UCCMW-16	Upgradient of Source Area Row	9–19	5/3/2016											
			8/11/2016		2,200			18,000	12,000	1,000		0.50 U	0.50 U	0.50 U
			11/14/2016											
			3/13/2017		3,100			14,000	10,000	1,200		0.50 U	0.50 U	19

Table 6.2
Groundwater Conventionals and Field Parameter Data (1)

			Analyte Class	Conventionals								Dissolved Gases		
			Analyte	Dissolved Oxygen	Nitrate	ORP	pH	Sulfate	Sodium	Total Organic Carbon	Turbidity	Ethane	Ethene	Methane
			Units	mg/L	µg/L	mV	Standard Units	µg/L	µg/L	µg/L	NTU	µg/L	µg/L	µg/L
Location	Location Information (2)	Interval (ft bgs)	Sample Date											
Monitoring Wells (cont.)														
Shallow Aquifer Zone Wells (3) (cont.)														
UCCMW-17	Upgradient of Source Area Row	10–20	5/3/2016											
			8/11/2016		1,800			19,000	17,000	1,000		0.50 U	0.50 U	0.50 U
			11/10/2016											
			3/13/2017		3,600			30,000	30,000	7,000		5.2 U	1.5	450
			3/11/2020	3.90		149.8	6.09				3.08	0.22 UJ	0.29 UJ	0.55 UJ
UCCMW-18	Source Area Row	10–20	5/3/2016		2,000			20,000 U	20,000	67,000		67 U	240	5,500
			8/12/2016		1,900			10,000	12,000	13,000		94 U	8.7	12,000
			11/10/2016		2,500			10,000 U	21,000	46,000		130 U	78	11,000
			3/13/2017		350			25,000 U	40,000	59,000		120 U	43	14,000
			3/11/2020									0.22 UJ	2.3 J	1,300 J
			3/11/2020	0.55		-48.3	6.21				5.70	0.22 UJ	2.2 J	1,400 J
UCCMW-19	Source Area Row	10–20	5/4/2016		140			25,000 U	85,000	200,000		67 U	1.3	9,500
			8/12/2016		55			6,800	24,000	38,000		150 U	12 U	8,600
			11/10/2016		50 U			10,000 U	18,000	31,000		85 U	6.7 U	5,700
			3/9/2017		110			25,000 U	19,000	18,000		35 U	5.5 U	4,100
UCCMW-20	Downgradient of First Row	8–18	5/5/2016		2,300			19,000	16,000	2,100		0.50 U	0.50 U	0.78
			8/11/2016		1,300			24,000	12,000	2,400		0.50 U	0.50 U	1.3
			11/29/2016		1,500			19,000	9,700	2,100		0.50 U	0.50 U	3.0
			3/8/2017		2,500			89,000	19,000	2,500		0.50 U	0.50 U	0.98
UCCMW-21	Source Area Row	12–22	5/5/2016		2,900			26,000	15,000	3,300		0.50 U	0.50 U	0.50 U
			8/11/2016		210			18,000	26,000	19,000		10 U	0.98 U	810
			11/29/2016		160			12,000	17,000	13,000		1.2 U	0.50 U	53
			3/8/2017		100			12,000	21,000	5,500		15 U	1.4 U	1,100
			3/9/2020	0.34		1.3	6.18				7.87			
UCCMW-23	West of Second Row	8–18	8/12/2016											
			3/9/2017											
UCCMW-24	First Row	8–18	8/11/2016											
			3/7/2017											
			3/9/2020	0.48		20.9	6.36				8.42	0.22 UJ	0.29 UJ	1,100 J
UCCMW-25	First Row	8–18	5/5/2016		1,800			21,000	32,000	2,300		0.50 U	0.50 U	0.84
			8/11/2016		320			5,000 U	59,000	130,000		18 U	6.3	1,500
			11/29/2016		50 U			10,000 U	32,000	6,200		32 U	1.8 U	1,400
			3/7/2017		50 U			5,000 U	42,000	14,000		90 U	11 U	11,000
			3/9/2020	0.34		-35.4	6.37				56.67	0.22 UJ	0.29 UJ	8,300 J
UCCMW-26	Third Row	5–15	5/5/2016		100			5,000 U	45,000	70,000		120 U	7.9 U	10,000
			8/10/2016		150			10,000 U	41,000	28,000		130 U	20 U	11,000
			11/11/2016		60			5,000 U	68,000	42,000		160 U	6.1	12,000
			3/13/2017		50 U			25,000 U	46,000	27,000		95 U	9.8 U	11,000
UCCMW-27	Third Row	5–15	5/5/2016		540			47,000	23,000	8,500		8.4 U	0.89 U	730
			8/10/2016											
			11/11/2016		50 U			18,000	31,000	8,300		50 U	2.2 U	3,600
			3/13/2017											
			3/9/2020	0.76		-54.7	6.42				8.44	0.22 UJ	0.29 UJ	2,700 J
UCCMW-29	Central Plume	5–15	7/13/2020	7.29		118.7	6.55				9.74	0.22 U	0.29 U	83
UCCMW-32	West of Third Row	15–25	7/13/2020	2.16		116.4	6.58				47.05	0.22 U	0.29 U	32

Table 6.2

Groundwater Conventionals and Field Parameter Data [(1)]

			Analyte Class	Conventionals								Dissolved Gases		
			Analyte	Dissolved Oxygen	Nitrate	ORP	pH	Sulfate	Sodium	Total Organic Carbon	Turbidity	Ethane	Ethene	Methane
			Units	mg/L	µg/L	mV	Standard Units	µg/L	µg/L	µg/L	NTU	µg/L	µg/L	µg/L
Location	Location Information [(2)]	Interval (ft bgs)	Sample Date											
Monitoring Wells (cont.)														
Deep Aquifer Zone Wells [(3)]														
UCCMW-4D	Source Area	35–40	8/12/2016											
			3/9/2017											
			3/11/2020	0.65		-19.1	7.01				13.20	0.22 UJ	0.29 UJ	0.64 J
UCCMW-28D	Northeast of Plume	40–50	8/4/2020	0.50		138.2	5.96				9.88	0.29	0.29 U	1.2
UCCMW-29D	Eastern Boundary	34–44	7/13/2020	0.24		-91.1	7.61				25.68	0.98	0.71	410
UCCMW-30D		26–36	7/14/2020	0.39		140.0	5.84				6.95	3.3 U	4.3 U	1,100
UCCMW-31D	Central Plume	18–28	7/13/2020	0.28		90.1	6.21				15.98	3.3 U	4.3 U	1,200
UCCMW-32D	Western Boundary	30–40	7/13/2020	0.39		-75.5	6.70				2.90	0.22 U	0.29 U	5.9
UCCMW-33D		49–59	7/21/2020	0.33		-118.7	7.43				8.40	2.2 U	2.9 U	590
UCCMW-34D	Downgradient Plume	35–50	7/21/2020	2.02 JS		57.5	6.18				2.20	6.7 U	8.7 U	2,600
UCCMW-35D	West of Plume	30–40	7/21/2020	1.59		-68.4	6.72					0.22 U	0.29 U	6.0
UCCMW-36D	Central Plume	15–30	7/13/2020									2.2 U	2.9 U	860
			7/13/2020	0.44		74.9	6.17				2.22	2.2 U	2.9 U	840

Notes:

Blank cells are intentional. Most results rounded to two significant figures; dissolved oxygen, ORP, pH, and turbidity presented at field instrumentation precision.

1 Field parameter data collected following completion of the most recent bioinjection event are presented in this table. Sample dates listed for each well in this table reflect dates analytical data were collected. Field parameter/conventionals data are not available for all groundwater monitoring events at all locations. Recent monitoring well locations and cVOC data are shown on Figure 6.2.

2 For shallow aquifer zone groundwater wells, location information is provided relative to bioinjection locations. For deep aquifer zone groundwater wells, location information is provided relative to the plume boundaries.

3 Shallow wells are screened or completed between approximately 5–25 ft bgs and deep wells are greater than approximately 25 ft bgs. Depth is determined using the midpoint of the screened/completion depth.

Abbreviations:

bgs Below ground surface
cVOC Chlorinated volatile organic compound
ft Feet
µg/L Micrograms per liter
mg/L Milligrams per liter
mV Millivolts
NTU Nephelometric Turbidity Unit
ORP Oxidation reduction potential
QC Quality control

Qualifiers:

J Analyte was detected and the concentration is estimated.
JS Analyte was detected and the concentration is estimated based on sampling QC from specific field observations.
U Analyte not detected at the given reporting limit.
UJ Analyte is not detected at the associated reporting limit, which is an estimate.

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) [(1)]

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical [(2)]	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? [(3)]	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level [(4)]	**0.050**	**0.030**	**160**	**1,600**	**0.67**	**0.020**	**0.030**	**6.0**	**30**	**2,000**
Location	**Sample Date**	**Depth Range (ft bgs)**										
BB-1	5/19/2009	10–11	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U	0.0011 U	0.0011 U	5.7 U	140
BLBH-23	9/4/2009	3–3							0.020 U	0.029 U	1.5 U	1,700
		15–15							0.020 U	0.032 U	1.6 U	140
BLMW-11	1/13/2014	14–15	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.011 U	0.027 U	0.13 U	13	
BLMW-12	1/6/2014	11–12	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0054 U	0.020 U	0.064 U	6.4	
		9–10	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0084 U	0.022 U	0.11 U	11	
BLMW-6	9/4/2009	2.5–2.5	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.00053 U	0.0026 U	0.020 U	0.037 U	1.8 U	120
		7.5–7.5	0.00060 U	0.00060 U	0.00060 U	0.00060 U	0.00060 U	0.0030 U	0.020 U	0.044 U	2.2 U	62 U
BLSS-1	9/9/2009	0–0.5	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0067 U	0.020 U	0.055 U	2.8 U	680
BLSS-2	9/9/2009	0–0.5	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0052 U	0.020 U	0.057 U	2.8 U	1,000
CDM-B1	4/6/2009	6–6	0.0054	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.0049 U				
CDM-B10	4/7/2009	6–6	0.016	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.0048 U				
CDM-B11	4/7/2009	6–6	0.0030	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0054 U				
CDM-B12	4/7/2009	5–5	0.0011	0.00090 U	0.0013	0.00090 U	0.00090 U	0.0045 U				
CDM-B13	4/2/2009	6–6	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U			24 U	120 U
CDM-B15	4/3/2009	10–10	0.027	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0085 U				
CDM-B16	4/3/2009	13–13	0.0041	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0051 U				
CDM-B17	4/2/2009	11–11	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0057 U				
CDM-B18	4/6/2009	7–7	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0065 U				
CDM-B20	6/27/2011	6–6									***71 U***	1,300
CDM-B29	6/28/2011	6–6	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	**0.12**	0.0016	0.0011 U	***42 U***	**2,100**
CDM-B31	5/10/2013	9–9	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0074 U				
CDM-B32	5/10/2013	2.5–2.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0070 U				
		2.5–2.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0071 U				
CDM-B33	5/10/2013	7–7	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0096 U				
CDM-B34	5/10/2013	7–7	0.0015	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0077 U				
CDM-B36	5/9/2013	3–3	0.0013	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0074 U				
CDM-B37	5/9/2013	14–14	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0076 U				
CDM-B4	4/2/2009	6–6	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0060 U				
CDM-B5	4/2/2009	8–8	0.0011 U	0.0086	0.034	0.0011 U	0.0011 U	0.0057 U				
CDM-B6	4/1/2009	8–8	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U			25 U	120 U
CDM-B7	4/1/2009	9–9	0.0012	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0052 U			24 U	120 U
CDM-B8	4/7/2009	7–7	0.0017	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0050 U				
EAIa-B1	5/3/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		23–23	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B10	5/4/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B11	5/4/2016	10–10							0.020 U	0.020 U	2.0 U	250 U
EAIa-B2	5/3/2016	10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		23–23	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) (1)

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? (3)	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level (4)	0.050	0.030	160	1,600	0.67	0.020	0.030	6.0	30	2,000
Location	Sample Date	Depth Range (ft bgs)										
EAIa-B3	5/3/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	**0.52 J**				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		23–23	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B4	5/3/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15							0.020 U	0.020 U	2.0 U	250 U
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		23–23	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B5	5/3/2016	15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		25–25	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B6	5/4/2016	15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		20–20	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		25–25	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIa-B7	5/4/2016	10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
EAIa-B8	5/4/2016	15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
EAIa-B9	5/4/2016	5–5							0.020 U	0.020 U	2.0 U	250 U
EAIb-B1	5/10/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B10	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B11	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B12	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
EAIb-B13	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B14	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B15	5/11/2016	3–3	**0.21**	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B16	5/12/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B17	5/12/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) (1)

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? (3)	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level (4)	0.050	0.030	160	1,600	0.67	0.020	0.030	6.0	30	2,000
Location	Sample Date	Depth Range (ft bgs)										
EAIb-B18	5/12/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B19	5/12/2016	4–4	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	510 (5)
		9–9	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B2	5/10/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B20	5/12/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B21	5/12/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B22	5/12/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B3	5/10/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		7.5–7.5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		13–13	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B4	5/10/2016	5–5	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		10–10	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
		15–15	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B5	5/10/2016	4–4	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		9–9	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B6	5/10/2016	13–13	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		5–5	0.037	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B7	5/10/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
EAIb-B8	5/10/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***	0.020 U	0.020 U	2.0 U	250 U
EAIb-B9	5/11/2016	3–3	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		8–8	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
		14–14	0.025 U	0.020 U	0.050 U	0.050 U	0.050 U	***0.50 U***				
ESD-B1	12/15/2011	7–8	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U	0.0011 U	0.0011 U		
ESD-B2	12/15/2011	7–8	0.0084	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0060 U	0.0012 U	0.0012 U		
ESS-B1	12/15/2011	5–6	0.0017	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0061 U	0.0012 U	0.0012 U		
ESS-B2	12/15/2011	6–7	0.0014 U	0.0014 U	0.0041	0.0014 U	0.0024	0.0069 U	0.0014 U	0.0014 U		
GM-1	5/19/2009	5–7	0.0056	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0051 U	0.0010 U	0.0010 U	6.0 U	220
GM-2	5/19/2009	6–8							0.020 U	0.036 U	3.6 U	470
GM-3	5/19/2009	10–12	0.0099	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0052 U	0.0010 U	0.0010 U	6.1 U	85

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) (1)

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? (3)	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level (4)	0.050	0.030	160	1,600	0.67	0.020	0.030	6.0	30	2,000
Location	Sample Date	Depth Range (ft bgs)										
GM-4	5/19/2009	5–7							0.020 U	0.051 U	5.1 U	740
GM-5	5/19/2009	7–8	0.00096 U	0.00096 U	0.00096 U	0.00096 U	0.00096 U	0.0048 U	0.00096 U	0.00096 U	4.6 U	940
GM-6	5/19/2009	6–8	0.0023	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.0045 U	0.00089 U	0.00089 U	5.8 U	390
HWA-CH-B1	9/30/2011	7–7	0.0041	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
HWA-CH-B2	9/30/2011	2–2	0.017	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0054 U				
		4–4	0.016	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0091				
		6–6	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
HWA-CH-B3	9/30/2011	3–3	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0057 U				
		6–6	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
		8–8	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0054 U				
HWA-CH-B4	9/30/2011	3–3	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0065 U				
		6–6	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0060 U				
		8–8	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0061 U				
HWA-CH-B9	9/30/2011	1.5–1.5	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0058 U				
		7–7	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0059 U				
HWA-HH-1	11/18/2011	4–4	0.0019	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0063 U				
HWA-SB-N	11/21/2011	0–0.5	0.0098	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
HWA-SB-S	11/21/2011	0–0.5	0.0092	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
Lot5-1	8/3/2015	15–15	0.0014									
Lot5-2	8/3/2015	12–12	0.0012 U									
		18–18	0.0018									
Lot5-3	8/3/2015	10–10	0.0035									
		2.5–2.5	0.0020									
Lot5-4	8/3/2015	15–15	0.0013									
		18–18	0.0031									
Lot5-5	8/3/2015	2.5–2.5	0.0012 U									
		17–17	0.0012 U									
		18.5–18.5	0.0013									
Lot5-6	8/3/2015	17.5–17.5	0.0020									
Lot8-1	8/4/2015	2.5–2.5	0.0037									
		6–6	0.0042									
Lot8-3	8/4/2015	10–10	0.0015									
		5.5–5.5	0.0033									
Lot8-4	8/4/2015	1.5–1.5	0.0012 U									
		8–8	0.0029									
PP-1	10/14/2013	8.5–8.5	**0.081**	0.0085	0.0088	0.00063 U	0.00063 U	0.0031 U				
		12–12	0.0062	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U				
PP-10	10/15/2013	1–1	0.0050	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U				
		2.5–2.5	0.0018	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.0032 U				
PP-11	10/15/2013	2–2	0.0010	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U				
		6.5–6.5	0.015	0.0015	0.00080 U	0.00080 U	0.00080 U	0.0040 U				
PP-12	10/15/2013	5–5	0.00073 U	0.00073 U	0.00073 U	0.00073 U	0.00073 U	0.0036 U	0.020 U	0.041 U	4.1 U	
		8.5–8.5	0.00086	0.00064 U	0.00064 U	0.00064 U	0.00064 U	0.0032 U	0.020 U	0.038 U	3.8 U	
PP-13	10/15/2013	8.5–8.5	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.0033 U	0.020 U	0.042 U	4.2 U	
		2–2	0.0014	0.00071 U	0.00071 U	0.00071 U	0.00071 U	0.0035 U	0.020 U	0.040 U	4.0 U	
		2–2	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U	0.020 U	0.035 U	3.5 U	

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) [(1)]

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical [(2)]	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? [(3)]	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level [(4)]	0.050	0.030	160	1,600	0.67	0.020	0.030	6.0	30	2,000
Location	Sample Date	Depth Range (ft bgs)										
PP-14	10/16/2013	9.5–9.5	0.0061	0.00095	0.00090	0.00069 U	0.00069 U	0.0034 U				
		5–5	0.00080	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.0037 U				
PP-15	10/16/2013	2.5–2.5	0.015	0.00063 U	0.00063 U	0.00063 U	0.00063 U	0.0032 U				
		3.5–3.5	0.00099	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.0037 U				
		7.8–7.8	0.00069 U	0.00069 U	0.00069 U	0.00069 U	0.00069 U	0.0035 U				
PP-16	10/16/2013	3–3	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.0049 U				
		7.9–7.9	0.0085	0.00063 U	0.00063 U	0.00063 U	0.00063 U	0.0032 U				
PP-17	10/16/2013	1.5–1.5	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.0037 U				
		7.5–7.5	0.00075 U	0.00075 U	0.00075 U	0.00075 U	0.00075 U	0.0037 U				
PP-18	10/16/2013	6–6	0.0045	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.0038 U				
		5–5	0.0044	0.00063 U	0.00063 U	0.00063 U	0.00063 U	0.0032 U				
PP-19	10/16/2013	5–5	0.0079	0.00063 U	0.00063 U	0.00063 U	0.00063 U	0.0031 U				
		7.5–7.5	0.0012	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.0037 U				
PP-2	10/14/2013	6–6	0.0027	0.00075 U	0.00075 U	0.00075 U	0.00075 U	0.0037 U				
		8.8–8.8	0.028	0.0013	0.00057 U	0.00057 U	0.00057 U	0.0028 U				
PP-20	10/17/2013	6–6	0.0015	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.0047 U				
		10–10	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.0049 U				
PP-21	10/17/2013	4–4	0.012	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0053 U				
			0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U				
PP-22	10/17/2013	3–3	0.0088	0.00093 U	0.00093 U	0.00093 U	0.00093 U	0.0046 U				
		10–10	0.0055	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0052 U				
PP-23	10/17/2013	6–6	0.0085	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0050 U				
		9–9	0.0056	0.00094 U	0.00094 U	0.00094 U	0.00094 U	0.0047 U				
PP-24	10/17/2013	7–7	**0.075**	0.0055	0.0034	0.00092 U	0.00092 U	0.0046 U				
		10–10	0.0099	0.0011	0.00096 U	0.00096 U	0.00096 U	0.0048 U				
PP-25	10/17/2013	3–3	0.015	0.00093 U	0.00093 U	0.00093 U	0.00093 U	0.0047 U				
		7–7	0.0022	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
PP-26	10/18/2013	7–7	0.0038	0.00085 U	0.00085 U	0.00085 U	0.00085 U	0.0043 U				
		2–2	0.0064	0.00063 U	0.00063 U	0.00063 U	0.00063 U	0.0031 U				
PP-27	10/18/2013	7.8–7.8	0.0033	0.00071 U	0.00071 U	0.00071 U	0.00071 U	0.0036 U				
		3–3	0.00092	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U				
PP-28	10/18/2013	2–2	0.0012	0.00069 U	0.00069 U	0.00069 U	0.00069 U	0.0035 U				
		7.5–7.5	0.0021	0.00070 U	0.00070 U	0.00070 U	0.00070 U	0.0035 U				
PP-29	10/18/2013	2–2	0.0026	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.0033 U				
		6–6	0.0013	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.0032 U				
PP-3	10/14/2013	5–5	0.0032	0.00064 U	0.00064 U	0.00064 U	0.00064 U	0.0032 U				
		9–9	0.047	0.0013	0.00063 U	0.00063 U	0.00063 U	0.0031 U				
PP-30	10/18/2013	2.5–2.5	**0.057**	0.0017	0.00064 U	0.00064 U	0.00064 U	0.0032 U				
		7–7	0.0022	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.0039 U				
PP-4	10/14/2013	1–1	0.034	0.00057 U	0.00057 U	0.00057 U	0.00057 U	0.0029 U				
		5.9–5.9	0.0046	0.00072 U	0.00072 U	0.00072 U	0.00072 U	0.0036 U				
PP-5	10/14/2013	7.5–7.5	0.0019	0.00072 U	0.00072 U	0.00072 U	0.00072 U	0.0036 U				
			0.0032	0.00065 U	0.00065 U	0.00065 U	0.00065 U	0.0032 U				
		6–6	0.0054	0.00062 U	0.00062 U	0.00062 U	0.00062 U	0.0031 U				
PP-6	10/14/2013	3–3	0.0011	0.00068 U	0.00068 U	0.00068 U	0.00068 U	0.0034 U				
		6–6	0.0013	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.0038 U				

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) (1)

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical (2)	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl chloride	Methylene chloride	Benzene	Ethylbenzene	Gasoline-Range Organics	Total DRO & ORO
		Is Chemical a Soil COC or COPC? (3)	COC	COPC	COPC	COPC	COPC	COPC	COPC	COPC	COC	COPC
		Soil Cleanup Level (4)	0.050	0.030	160	1,600	0.67	0.020	0.030	6.0	30	2,000
Location	Sample Date	Depth Range (ft bgs)										
PP-7	10/14/2013	5–5	**0.12**	0.0070	0.0020	0.00061 U	0.00061 U	0.0031 U				
		9.5–9.5	0.0043	0.00069 U	0.00069 U	0.00069 U	0.00069 U	0.0034 U				
PP-8	10/15/2013	4.5–4.5	0.041	0.0091	0.015	0.00068 U	0.00068 U	0.0034 U				
		6–6	0.0051	0.0010	0.0021	0.00071 U	0.00071 U	0.0036 U				
PP-9	10/15/2013	5.8–5.8	0.029	0.00081	0.00055 U	0.00055 U	0.00055 U	0.0028 U				
		9.5–9.5	0.020	0.0011	0.00063 U	0.00063 U	0.00063 U	0.0031 U				
PSD-B1	12/15/2011	2–3	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U	0.0011 U	0.0011 U		
		5–6	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0069 U	0.0014 U	0.0014 U		
		8–9	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.0049 U	0.00097 U	0.00097 U		
PSD-B2	12/15/2011	2–3	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0065 U	0.0013 U	0.0013 U		
		5–6	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0062 U	0.0012 U	0.0012 U		
		8–9	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U	0.0011 U	0.0011 U		
PSD-B3	12/14/2011	3–4	**0.15**	0.0063	0.0011 U	0.0011 U	0.0011 U	0.0054 U	0.0011 U	0.0011 U		
		6–7	**0.12**	0.013	0.0011 U	0.0011 U	0.0011 U	0.0054 U	0.0011 U	0.0011 U		
PSD-B4	12/15/2011	2–3	0.0015 U	0.0024	0.0029	0.0015 U	0.0015 U	0.0074 U	0.0015 U	0.0015 U		
		4–5	0.0011 U	0.0011 U	0.0013	0.0011 U	0.0011 U	0.0053 U	0.0011 U	0.0011 U		
PSD-B5	12/15/2011	3–4	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0057 U	0.0014	0.0011 U		
		6–7	0.0068	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.0049 U	0.00099 U	0.00099 U		
PSD-B6	12/15/2011	3–4	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0059 U	0.0012 U	0.0012 U		
		6–7	0.0026	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0062 U	0.0012 U	0.0012 U		
Px-SB01	4/1/2010	14–14							0.020 U	0.055 U	5.5 U	54 U
Px-SB02	3/31/2010	16–16							0.059 U		5.9 U	0.020 U
Px-SB03	3/31/2010	15–15							0.020 U	0.073 U	7.3 U	
Px-SB04	3/31/2010	1–1	0.034 U	***0.034 U***	0.034 U	0.034 U	0.034 U	***0.17 U***	0.020 U	0.054 U	5.4 U	54 U
Px-SB05	4/1/2010	17–17	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0057 U				
			0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0056 U				
UCCB-1	3/21/2017	25.5–25.5	0.00096 U	0.00096 U	0.0016	0.00096 U	0.00096 U	0.0048 U				
UCCB-2	4/5/2017	25–25	0.046	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0084 U				
UCCB-3	3/24/2017	32.5–32.5	0.0015	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U				
UCCB-4	4/5/2017	25–25	0.034	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0072 U				
UCCB-5	3/22/2017	36–36	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0057 U				
UCCB-6	3/23/2017	25.5–25.5	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0062 U				
UCCB-7	3/23/2017	20–20	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0061 U				
UCCB-8	3/27/2017	25–25	0.025	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0074 U				
UCCB-9	3/22/2017	35.5–35.5	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0059 U				
UCCB-10	3/20/2017	11–11	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.0044 U				
UCCMW-28D	7/1/2020	35.5–36.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000053 U	0.0053 U	0.0011 U	0.0011 U	24 U	120 U
UCCMW-29	6/24/2020	8.5–9.5	0.036	0.0011 U	0.0011 U	0.0011 U	0.000056 U	0.0056 U	0.0011 U	0.0011 U	25 U	130 U
UCCMW-29D	6/23/2020	42.5–43	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.000052 U	0.0052 U	0.0010 U	0.0010 U	21 U	110 U
UCCMW-30D	6/25/2020	28.5–29.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000055 U	0.0055 U	0.0011 U	0.0011 U	26 U	130 U
		35–36	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000054 U	0.0054 U	0.0011 U	0.0011 U	24 U	120 U
UCCMW-31D	6/24/2020	10–10.5	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.000045 U	0.0045 U	0.00089 U	0.00089 U	25 U	130 U
		20–21	0.042	0.0011 U	0.0011 U	0.0011 U	0.000054 U	0.0054 U	0.0011 U	0.0011 U	25 U	130 U
UCCMW-32	6/29/2020	17.5–18.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000076	0.0054 U	0.0011 U	0.0011 U	25 U	120 U
		17.5–18.5	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.000077	0.0045 U	0.00091 U	0.00091 U	24 U	120 U
UCCMW-32D	6/29/2020	39–40	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.000059 U	0.0059 U	0.0012 U	0.0012 U	24 U	120 U
		25.5–26.5	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.000052 U	0.0052 U	0.0010 U	0.0010 U	25 U	130 U

Table 6.3
Soil Data for Chemicals of Potential Concern (mg/kg) [(1)]

		Analyte Class	cVOCs					VOCs	BTEX		TPH	
		Chemical [(2)]	**PCE**	**TCE**	**cis-1,2-DCE**	**trans-1,2-DCE**	**Vinyl chloride**	**Methylene chloride**	**Benzene**	**Ethylbenzene**	**Gasoline-Range Organics**	**Total DRO & ORO**
		Is Chemical a Soil COC or COPC? [(3)]	**COC**	**COPC**	**COPC**	**COPC**	**COPC**	**COPC**	**COPC**	**COPC**	**COC**	**COPC**
		Soil Cleanup Level [(4)]	**0.050**	**0.030**	**160**	**1,600**	**0.67**	**0.020**	**0.030**	**6.0**	**30**	**2,000**
Location	**Sample Date**	**Depth Range (ft bgs)**										
UCCMW-33D	6/24/2020	23–24	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000056 U	0.0056 U	0.0011 U	0.0011 U	25 U	120 U
		36.5–37.5	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.000048 U	0.0048 U	0.00097 U	0.00097 U	24 U	120 U
UCCMW-34D	6/25/2020	29.8–30.5	0.00090 U	0.00090 U	0.00090 U	0.00090 U	0.000045 U	0.0045 U	0.00090 U	0.00090 U		
		39–40	0.0058	0.00091 U	0.00091 U	0.00091 U	0.000045 U	0.0045 U	0.00091 U	0.00091 U		
UCCMW-35D	6/30/2020	30.5–31.5	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.000053 U	0.0053 U	0.0011 U	0.0011 U	24 U	120 U
UCCMW-36D	6/30/2020	2–3	***0.052 U***	***0.052 U***	0.052 U	0.052 U	0.0026 U	***0.26 U***	**2.3**	**14**	**450**	**3,600** [(5)]
		10.5–11.5	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.000050 U	0.0050 U	0.0013	0.0017	24 U	120 U
UCCMW-4D	1/9/2014	32.5–33.5	0.0014	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.0048 U	0.068 U		6.8 U	0.020 U
		40–41	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.0041 U	0.052 U		5.2 U	0.020 U
UCCMW-6	1/8/2014	15–16	0.0034	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.0044 U	0.040 U		4.0 U	0.020 U
UCCMW-9	1/8/2014	16–17	0.0013	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.0045 U	0.042 U		4.2 U	0.020 U
UST-B-7.5	11/17/2015	7.5–7.5	0.0047	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0052 U				200
UST-ES-5	11/17/2015	5–5	0.0056	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0051 U				46
UST-NS-5	11/17/2015	5–5	0.0025	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0058 U				81
UST-SS-5	11/17/2015	5–5	0.0044	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0053 U				57 U
UST-WS-5	11/17/2015	5–5	0.0024	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0055 U				55 U

Notes:

Soil results and CULs are rounded to two significant figures.

Blank cells are intentional.

Italics Non-detect result exceeds CUL.

RED/BOLD Detected result exceeds CUL.

(shaded) Field duplicate result; not used to determine compliance relative to CUL.

1 The dataset includes all soil data collected on or after January 1, 2009, from the study area. If the basis of the soil dataset is protection of human health via direct contact, only soil data collected within the 0- to 15-foot bgs interval are compared to the preliminary CUL. If the basis of the CUL is protection of groundwater, soil data collected from any depth are compared to the preliminary CUL.

2 This table includes only chemicals that were identified as COPCs in soil in Tables 5.5 and 5.6.

3 Soil COPCs were identified in Tables 5.5 and 5.6. Soil COCs were identified in Table 5.12.

4 CULs were developed in Table 5.11.

5 Hydrocarbons in the gasoline range and lube oil range are impacting the diesel-range result.

Abbreviations:

bgs Below ground surface
BTEX Benzene, toluene, ethylbenzene, and xylenes
cis-DCE cis-1,2-dichloroethene
COC Chemical of concern
COPC Chemical of potential concern
CUL Cleanup level
cVOC Chlorinated volatile organic compound
DRO Diesel-range organics
ft Feet
mg/kg Milligrams per kilogram
ORO Oil-range organics
PCE Tetrachloroethene
TCE Trichloroethene
TPH Total petroleum hydrocarbons
trans-DCE trans-1,2-Dichloroethene
VOC Volatile organic compound

Qualifier:

U Analyte is not detected at the associated reporting limit.

Table 9.1
Preliminary Screening of Remedial Technologies

Remedial Technology	Applicable Media	COCs Addressed	General Technology Benefits	General Technology Constraints	Consideration of Site Physical Conditions and RAOs	Rationale for Retaining or Rejecting Technology
Passive Technologies						
No Action	• Soil • Groundwater	• COCs are not directly addressed by this technology; however, contaminant mass reduction can occur due to natural processes (dispersion, degradation, geochemical changes, etc.)	• No cost to implement. • No long-term monitoring cost. • Does not impact site use.	• Does not reduce or remove chemical concentrations. • Does not protect human health and the environment. • Does not meet cleanup goals in a reasonable restoration time frame. • Technology does not have proven success at sites with similar conditions.	• Not impacted by physical conditions at the Site. • Does not contribute to achievement of RAOs. • Does not affect site use.	The No Action technology does not address any of the site COCs in soil or groundwater or achieve RAOs. **No Action is Rejected** from further evaluation.
Institutional Controls	• Soil • Groundwater	• Applicable to cVOC and arsenic contamination.	• Low cost to implement. • Protective of direct contact pathway through controls. • Technology has proven success at sites with similar conditions.	• Does not reduce or remove chemical concentrations. • Must be used in combination with other technologies. • Limits future site use through restrictive covenants or administrative measures.	• May require placement of restrictions on property that are not owned by the City. • Not limited by site physical conditions. • Contributes to achievement of RAOs when used in combination with other technologies.	Institutional controls are applicable to all COCs and all media, achieve RAOs when used in combination with other technologies, and can be implemented given site conditions. **Institutional Controls are Retained** for further evaluation.
Engineering Controls	• Soil • Groundwater	• Applicable to cVOC and arsenic contamination.	• Typically low cost to implement. • Can be protective of vapor intrusion pathway through physical measures, such as a vapor barrier.	• Does not reduce or remove chemical concentrations. • Must be used in combination with other technologies. • Requires maintenance and institutional controls in perpetuity.	• Not limited by site physical conditions. • Contributes to the achievement of RAOs when used in combination with other technologies.	Engineering controls are applicable to all COCs and all media, achieve RAOs when used in combination with other technologies, and can be implemented given site conditions. **Engineering Controls are Retained** for further evaluation.
Monitored Natural Attenuation	• Groundwater	• Applicable to cVOC and arsenic contamination.	• Low cost associated with implementation. • Does not cause impacts to site use. • Technology has proven success at sites with similar conditions.	• Long-term monitoring required until cleanup levels are met, or in perpetuity if groundwater does not meet cleanup levels. • Restoration time frames are often too long and considered unreasonable. • Does not control chemical migration.	• Not limited by site physical conditions and can be implemented under any future use conditions. • Does not contribute to achievement of RAOs when used in combination with other remedial technologies.	Monitored Natural Attenuation would be applicable to achieving RAOs for naturally degrading COCs in groundwater when used in combination with other technologies. **Monitored Natural Attenuation is Retained** for further evaluation.

Table 9.1
Preliminary Screening of Remedial Technologies

Remedial Technology	Applicable Media	COCs Addressed	General Technology Benefits	General Technology Constraints	Consideration of Site Physical Conditions and RAOs	Rationale for Retaining or Rejecting Technology
Passive Technologies (cont.)						
Surface Capping	• Soil • Groundwater (by protection of soil to groundwater pathway)	• Applicable to all COCs.	• Low cost associated with implementation; pavement already in place in most of site. • Does not cause impacts to site use.	• Regular inspection and maintenance required. • Does not address vapor intrusion risk; must be used in combination with other technologies. • Implementation must be consistent with City of Bothell redevelopment plan requirements for vegetated landscape strips.	• Not limited by site physical conditions and can be implemented under most future use conditions. • Contributes to achievement of RAOs when used in combination with other technologies.	Surface capping is applicable to all COCs in soil and groundwater, achieves RAOs when used in combination with other technologies, and can be implemented given site conditions. **Surface Capping is Retained** for further evaluation.
Active Technologies						
Air Sparging	• Groundwater	• Applicable to cVOC contamination.	• Removes volatile contaminants from groundwater including cVOCs.	• Implementability depends on site-specific factors such as soil heterogeneity. • Requires routine O&M.	• Would cause some disruption to operations. • Typically requires long-term operation and maintenance. • Achieves RAOs by reducing cVOC concentrations in groundwater.	The plume size limits the potential effectiveness of air sparging in achievement of RAOs. It would provide marginal benefit compared to the capital cost, disruption, and long-term operation and maintenance. **Air Sparging is Rejected** from further evaluation.
Chemical Oxidation	• Soil • Groundwater	• Applicable to cVOC and arsenic contamination.	• Technology reduces contaminant concentrations and mass in place. • Low cost associated with implementation (i.e., no landfill disposal fees).	• Effectiveness limited by subsurface conditions and site heterogeneity as injected solutions can follow preferential pathways. • Requires multiple rounds of injection. • Contaminant rebound may be observed when source concentrations and volume are elevated and insufficient source treatment has occurred.	• Not limited by physical conditions other than de minimis areas such as structural portions of buildings. • Technology would temporarily impact to off-property business operations. • May achieve RAOs by reducing cVOC concentrations in groundwater.	Chemical Oxidation is more costly than other in situ groundwater treatment methods and was not effective in reducing cVOC concentrations in groundwater during previous IMs at the Site. **Chemical Oxidation is Rejected** from further evaluation.

Table 9.1
Preliminary Screening of Remedial Technologies

Remedial Technology	Applicable Media	COCs Addressed	General Technology Benefits	General Technology Constraints	Consideration of Site Physical Conditions and RAOs	Rationale for Retaining or Rejecting Technology
Active Technologies (cont.)						
In Situ Groundwater Treatment by Bioremediation	• Groundwater	• Applicable to cVOC contamination.	• Rapid reduction in contaminant concentration and mass. • Typically causes minimal permanent impact to site use.	• Effectiveness is highly dependent on geochemical conditions and success is highly dependent on the ability to deliver the substrate to the affected areas. • Some commercial products have relatively high cost and additional injections may be necessary to achieve RAOs. • Altering geochemistry may solubilize arsenic and increase remedial time frame for achieving arsenic CULs.	• Not limited by physical conditions other than de minimis areas such as structural portions of buildings. • Technology would temporarily impact to off-property business operations and public rights-of-way. • Site soils are generally consistent and would not be expected to limit effectiveness. • Achieves RAOs by reducing cVOC concentrations in groundwater.	In situ groundwater treatment by bioremediation is applicable to cVOCs in groundwater, is implementable given site conditions, and achieves RAOs. **In situ groundwater treatment by bioremediation is Retained** for further evaluation.
In Situ Groundwater Treatment by Activated Carbon	• Soil • Groundwater	• Applicable to cVOC contamination.	• Technology reduces contaminant concentrations and mass in place. • Low cost associated with implementation (i.e., no landfill disposal fees). • Typically causes minimal permanent impact to site use.	• Relies on installation within the primary zone of impact, and design and application are highly dependent on adequate site characterization. • Effectiveness can be impacted by heterogeneous subsurface conditions. • Some commercial products have relatively high cost. • Altering geochemistry may solubilize arsenic and increase remedial time frame for achieving arsenic CULs.	• Not limited by physical conditions other than de minimis areas such as structural portions of buildings. • Technology would temporarily impact to off-property business operations and public rights-of-way. • Site soil types are generally consistent and would not be expected to limit effectiveness. • Achieves RAOs by reducing cVOC concentrations in groundwater.	In situ groundwater treatment using activated carbon is applicable to the COCs present in soil and groundwater, is implementable given site conditions, and achieves RAOs. **In situ groundwater treatment using activated carbon is Retained** for further evaluation.
Low Permeability Barrier Wall	• Groundwater	• Applicable to cVOC and arsenic contamination.	• Attains RAOs by containing groundwater contaminants and restricting continued migration of contaminated groundwater.	• Is relatively costly to implement. • May impact future site use or require relocation of existing utilities. • Could require hydraulic control (pumping) inside the barrier wall to maintain an inward gradient of groundwater in perpetuity. • Does not address contamination that has already migrated past the point of treatment.	• Could restrict future development or impact current use. • Would not achieve RAOs for contamination within the barrier wall, including properties owned by others. • The depth of the underlying silt layer necessary to confine the barrier wall makes implementation technically difficult.	The site conditions limit the effectiveness of a low-permeability barrier wall to contribute toward the achievement of RAOs and would not be cost effective to implement at the Site. **Low Permeability Barrier Wall is Rejected** from further evaluation.

Table 9.1
Preliminary Screening of Remedial Technologies

Remedial Technology	Applicable Media	COCs Addressed	General Technology Benefits	General Technology Constraints	Consideration of Site Physical Conditions and RAOs	Rationale for Retaining or Rejecting Technology
Active Technologies (cont.)						
Permeable Reactive Barrier Wall	• Groundwater	• Applicable to cVOC and arsenic contamination.	• Passively treats contaminated groundwater as it passes through the reactive barrier area. • Can be straightforward to implement, except at significant depths. • Is relatively feasible to implement at shallow depths and does not cause significant disruption to site use.	• A permeable reactive barrier wall can become "clogged" by migration of fines in groundwater and can be costly to maintain. • Depending on the concentrations in groundwater, the permeable reactive barrier wall may require replacement once the reaction capacity of the material in the wall is reached, or the wall pores become clogged. • Does not treat downgradient contamination	• Limited applicability given the degree of downgradient and downward migration of cVOCs that has already occurred in Site groundwater. • Does not contribute to achievement of RAOs when used in combination with other remedial technologies.	The permeable reactive barrier wall has limited applicability given Site groundwater conditions. **Permeable Reactive Barrier Wall is Rejected** from further evaluation.
Pump and Treat	• Groundwater	• Applicable to cVOC and arsenic contamination.	• Removes dissolved-phase chemicals from groundwater.	• High groundwater pumping rates would be required, resulting in high volumes of groundwater for treatment and disposal, which is costly. • Long-term O&M required for extraction system and longer restoration time frame.	• Permeable subsurface conditions could result in significant water volumes requiring treatment and disposal. • Pump and treat operations would cause ongoing impacts to future site use.	Pump and Treat would eventually achieve RAOs but would not be cost effective over time and would result in a longer restoration time frame than other groundwater treatment technologies. **Pump and Treat is Rejected** from further evaluation.
Thermal Treatment	• Soil • Groundwater	• Applicable to cVOC contamination.	• Can be implemented in a short time frame. • Can be implemented at greater depths than other technologies. • Treats both soil and groundwater contamination simultaneously.	• High cost associated with implementation. • Requires large loads of on-site power. • Requires substantial surface and subsurface infrastructure for operation. • Requires intensive O&M during short-term operation (usually 1 to 2 years).	• Technology is limited by physical conditions and would require a substantial amount of coordination and utility relocation for installation. • Thermal treatment would require equipment to remain on-site for the duration of the treatment time, which would likely disturb current operations.	Thermal treatment is energy intensive and disruptive and would not be cost-effective to treat the small source area of contamination and the large groundwater plume. **Thermal Treatment is Rejected** from further evaluation.
Soil Vapor Extraction	• Soil	• Applicable to cVOC contamination.	• Can be implemented with limited disturbance to surface activities. • System can be easily turned on and off to optimize performance and cost.	• Limited to treatment of vadose zone soil and volatile contaminants. • Relatively expensive to install and requires long-term O&M. • Does not address groundwater contamination for site COCs.	• Does not address saturated soil or groundwater, where the majority of site contamination is present.	Soil Vapor Extraction is limited in applicability to vadose zone soil contamination, which is limited at the Site. **Soil Vapor Extraction is Rejected** from further evaluation.

Table 9.1
Preliminary Screening of Remedial Technologies

Remedial Technology	Applicable Media	COCs Addressed	General Technology Benefits	General Technology Constraints	Consideration of Site Physical Conditions and RAOs	Rationale for Retaining or Rejecting Technology
Active Technologies (cont.)						
Soil Excavation and Landfill Disposal	• Soil • Groundwater	• Applicable to all site COCs.	• Effectively removes PCE source mass in excavation area in a short time frame. • Removal of saturated soil source mass contamination removes an ongoing source of contaminants to groundwater. • Technology has proven success at sites with similar conditions.	• Can be expensive to implement because of landfill disposal costs. • May require shoring for stability if open cuts cannot be made, or if excavation adjacent to rights-of-way or utility corridors is required. • Dewatering may be required for excavations extending below the groundwater table, which generates liquid waste streams that would require treatment and disposal.	• Technology would be applicable only in the source area, where contamination remains in soil. • Location of contaminated soil adjacent to and within public rights-of-way may limit applicability and/or effectiveness. • Contributes to achievement of RAOs when used in combination with other technologies for treatment of downgradient groundwater contamination.	Source removal addresses all COCs, is implementable given site conditions, and achieves RAOs when combined with other remedial technologies for downgradient groundwater. **Soil Excavation and Landfill Disposal is Retained** for further evaluation.

Abbreviations
BMP Best management practice
COC Contaminant of concern
cVOC Chlorinated volatile organic compound
O&M Operations and maintenance
RAO Remedial Action Objective
SVE Soil vapor extraction

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

Criteria	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Alternative Description	Alternative 1 consists of the following: • Excavation to remove soil exceeding CULs Site-wide • In situ groundwater treatment in the Source Property cVOC AOC by injection of activated carbon and S-MZVI • In situ groundwater treatment by Injection of activated carbon and S-MZVI in six equally spaced barriers along the length and width of the cVOC groundwater plume in the Shallow and Deep Groundwater cVOC AOCs Excavated soil would be disposed of off-site under a contained-in determination. Existing pavement would be restored after excavation. Alternative 1 would support site-wide groundwater recovery through the treatment of the cVOC source area and injection of activated carbon and S-MZVI barriers to treat cVOCs across the entire groundwater plume extent. Groundwater monitoring would be implemented to evaluate groundwater compliance with CULs site-wide. The anticipated restoration time frame is 4 to 5 years. ICs would not be required, as soil and groundwater would achieve CULs site-wide. Additionally, Site groundwater would achieve VI SLs in a reasonable restoration time frame.	Alternative 2 consists of the following: • Excavation to remove soil exceeding CULs in the Source Property cVOC AOC • Treatment with S-MZVI soil mixing in the deep excavation in the Source Property cVOC AOC • Injection of activated carbon and ZVI in situ treatment in five focused barriers along the length of the cVOC groundwater plume in the Shallow and Deep Groundwater cVOC AOCs Excavated soil would be disposed of off-site under a contained-in determination. Existing pavement would be restored after excavation. Alternative 2 would support site-wide groundwater treatment of the cVOC source area and injection of activated carbon and S-MZVI barriers to treat cVOCs in targeted areas throughout the groundwater plume. Groundwater monitoring would be implemented to evaluate groundwater compliance with CULs site-wide. The anticipated restoration time frame is 6 to 8 years. ICs would be required to address remaining soil contamination in the ROW and would require implementation of a contaminated soil protocol for future excavation in the ROW.	Alternative 3 consists of the following: • In situ groundwater treatment using emulsified vegetable oil substrate to enhance bioremediation in three zones: ○ Source Property cVOC AOC ○ Middle of the cVOC groundwater plume in the Shallow and Deep Groundwater cVOC AOCs ○ Downgradient cVOC plume boundary in the Deep Groundwater cVOC AOC Alternative 3 would support site-wide groundwater recovery through treatment of the cVOC source zone and downgradient treatment by enhanced biodegradation. Groundwater monitoring would be implemented to evaluate groundwater compliance with CULs site-wide. The anticipated restoration time frame is 8 to 10 years, including restabilization of geochemical parameters post-injection. ICs would be required to address remaining soil contamination in the ROW and would require implementation of a contaminated soil protocol for future excavation in the ROW. Administrative controls to address remaining soil contamination on the source property would require a parcel restriction overlay for future development.	Alternative 4 consists of the following: • In situ groundwater treatment in the Source Property cVOC AOC by injection of activated carbon and S-MZVI • Monitored natural attenuation of cVOCs in groundwater • Contingency soil vapor evaluation Alternative 4 would support site-wide groundwater recovery through the treatment of the cVOC source area. Groundwater monitoring would be implemented to verify natural attenuation of groundwater, which is expected to eventually achieve CULs site-wide. The anticipated restoration time frame is approximately 30 years or longer. ICs would be required to address remaining soil contamination in the ROW and would require implementation of a contaminated soil protocol for future excavation in the ROW. Administrative controls to address remaining soil contamination on the source property would require a parcel restriction overlay for future development. ICs may additionally be required for vapor intrusion.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

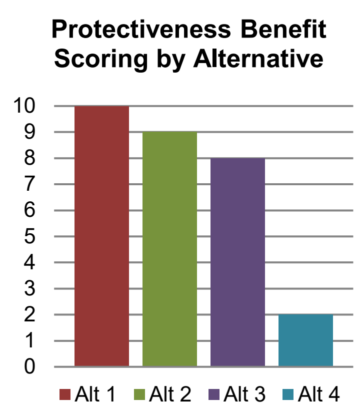
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Overall Protectiveness • Degree to which existing risks to human health and the environment are reduced • Time required to reduce risks and attain cleanup standards • On-site and off-site risks resulting from alternative implementation • Improvement in overall environmental quality 	• Risks associated with contaminated soil would be eliminated by full removal to CULs. • Risks associated with groundwater would be eliminated by plume-wide treatment. • The time frame to achieve soil CULs would be immediately following remedy implementation. The time frame for achievement of groundwater CULs site-wide is anticipated to be 4 to 5 years. • On-site risks during construction would be managed by proper H&S protocols and site security. There are no other added on-site risks. The off-site risks associated with contaminated material transport and disposal are negligible and would be managed using licensed operators and permitted disposal facilities. • Alternative 1 achieves the highest improvement in overall environmental quality because it permanently removes contamination exceeding CULs. This alternative has the shortest anticipated restoration time frame for groundwater compared to other alternatives due to aggressive source removal and treatment.	• Risks associated with contaminated soil would be reduced by removal of soil exceeding CULs on the source property, but risk reduction is less than Alternative 1, which also includes removal of contaminated soil in the ROW. • Risks associated with contaminated groundwater would be eliminated by targeted treatment. • The time frame to reduce risks associated with soil would be immediately following remedy implementation. The time frame for achievement of groundwater CULs site-wide is anticipated to be 6 to 8 years. • On-site risks during construction would be managed by proper H&S protocols and site security. There are no other added on-site risks. The off-site risks associated with contaminated material transport and disposal are negligible and would be managed using licensed operators and permitted disposal facilities. • Alternative 2 achieves the second-highest improvement in overall environmental quality because it permanently removes most of the remaining mass of contaminated soil and is expected to fully achieve CULs in groundwater. This alternative has a longer anticipated restoration time frame for groundwater compared to Alternative 1, which includes limited additional soil excavation and more in situ groundwater treatment barriers.	• Risks associated with contaminated soil would be managed by maintenance of pavement, but risk reduction is less than Alternatives 1 and 2, which include soil excavation. • Risks associated with contaminated groundwater would be eliminated by site-wide in situ treatment to biodegrade a significant extent of the current cVOC plume. • The time frame for achievement of groundwater CULs site-wide is anticipated to be 8 to 10 years. • On-site risks during construction would be managed by proper H&S protocols and site security. This alternative requires significant traffic control for work in the ROW. There are no other added on-site risks. The off-site risks associated with contaminated material transport would be limited to incidental investigation-derived waste as no soil excavation is proposed. • Alternative 3 achieves the third highest improvement in overall environmental quality because it is expected to fully achieve CULs in groundwater. This alternative has a longer anticipated restoration time frame for groundwater compared to Alternatives 1 and 2, which also remove contaminated soil mass and do not affect geochemical parameters that influence the solubility of arsenic.	• Risks associated with contaminated soil would be managed by maintenance of pavement, but risk reduction is less than Alternatives 1 and 2, which include soil excavation. • Risks associated with contaminated groundwater would be reduced by treatment of groundwater in the cVOC source area and resulting attenuation downgradient as source material is treated. • The time frame for achievement of groundwater CULs sitewide is anticipated to be 30 years or longer. • On-site risks during construction would be managed by proper H&S protocols and site security. There are no other added on-site risks. The off-site risks associated with contaminated material transport would be limited to incidental investigation-derived waste as no soil excavation is proposed. • Alternative 4 achieves the lowest improvement in overall environmental quality because cVOC contamination will remain in soil and groundwater for the longest amount of time after remedy implementation. This alternative has a significantly longer restoration time frame relative to other alternatives because it does not include contaminated soil removal or active treatment of the downgradient portions of the groundwater plume.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

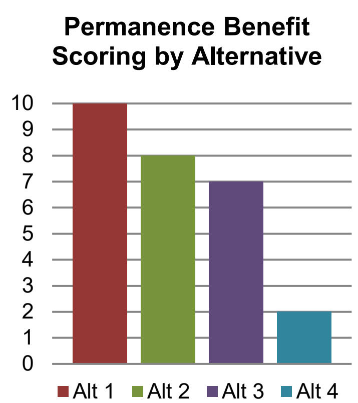
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Permanence • Degree of reduction of contaminant toxicity, mobility, and volume • Adequacy of destruction of hazardous substances • Reduction or elimination of substance release, and source of release • Degree of irreversibility of waste treatment processes • Volume and characteristics of generated treatment residuals 	• Alternative 1 is the most permanent alternative and provides the greatest reduction in contaminant volume compared to other alternatives. Excavation to CULs would remove significant volume of contaminated soil, and aggressive groundwater treatment would reduce contaminated groundwater concentrations to less than CULs over the restoration time frame. • The primary sources of contamination would be removed from the site by excavation and in situ treatment. • Excavation and off-site disposal of contamination are irreversible. There is a small potential for reversibility for contamination adsorbed to injected activated carbon in the saturated zone if groundwater conditions change substantially. • There are no treatment residuals associated with implementation of this technology.	• Alternative 2 provides a moderate to high reduction in contaminant volume compared to other alternatives. Excavation on the source property would remove the majority of contaminated soil within the site, and aggressive groundwater treatment would reduce contaminated groundwater concentrations to less than CULs over the restoration time frame. • The primary sources of contamination would be removed from the site by excavation and in-situ treatment. Remaining soil contamination would be controlled by maintaining pavement and implementing a ROW contamination protocol. • Excavation and off-site disposal of contamination are irreversible. There is a small potential for reversibility for contamination adsorbed to injected activated carbon in the saturated zone if groundwater conditions change substantially. Pavement is reversible but would be maintained per the ROW contamination protocol. • There are no treatment residuals associated with implementation of this technology.	• Alternative 3 provides a moderate reduction in contaminant volume compared to other alternatives. Groundwater treatment would reduce contaminated groundwater concentrations to less than CULs over the restoration time frame. • The primary sources of contamination would be removed from the site by in situ biodegradation. Remaining soil contamination would be controlled by maintaining pavement and implementing a ROW contamination protocol and parcel restriction overlays for development on the source property. • Bioremediation is irreversible but does involve the production of breakdown products, such as vinyl chloride, as part of the dechlorination process. Pavement is reversible but would be maintained per the ROW contamination protocol. • There are no treatment residuals associated with implementation of this technology.	• Alternative 4 is the least permanent alternative and provides a low reduction in contaminant volume compared to other alternatives because the majority of contamination would be addressed by natural attenuation. • Remaining soil contamination would be controlled by maintaining pavement and implementing a ROW contamination protocol and parcel restriction overlays for development on the source property. • Attenuation via breakdown of contaminants is irreversible but does involve the production of break-down products, such as vinyl chloride, as part of the dechlorination process. Pavement is reversible but would be maintained per the ROW contamination protocol. • There are no treatment residuals associated with implementation of this technology.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

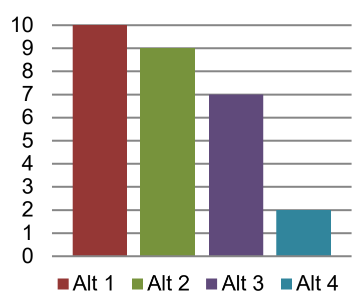
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Effectiveness over the Long-Term • Degree of certainty of alternative success • Reliability while contaminants on-site remain greater than CULs • Magnitude of residual risk • Effectiveness of controls implemented to manage residual risk **Effectiveness over the Long-Term Benefit Scoring by Alternative** 	• Alternative 1 provides the highest degree of certainty of success to meet RAOs and achieve groundwater CULs within a restoration time frame of 4 to 5 years site-wide. • Excavation is an effective and common technology to implement and would fully remove contaminants in soil. In situ treatment is also an effective and reasonably common technology to implement and would remove contamination in groundwater. • Degree of certainty for success to remediate groundwater site-wide is high because of soil removal and aggressive groundwater treatment. • No residual risk would remain in soil. • The risk from groundwater contamination remaining during the restoration time frame would be monitored by routine groundwater monitoring events until compliance with CULs was achieved. • De minimis residual risk would remain due to the small degree of potential reversibility of activated carbon treatment. This risk is well managed over the long term by the addition of S-MZVI to the injected reagent, the injection of a large quantity of reagent relative to contaminant concentrations, and multiple barriers providing redundancy for plume-wide treatment.	• Alternative 3 provides a high degree of certainty of success to meet RAOs and achieve groundwater CULs within a restoration time frame of 6 to 8 years at the CPOC. • Excavation is an effective and common technology to implement and would fully remove contaminants in soil. In situ treatment is also an effective and reasonably common technology to implement and would remove contamination in groundwater. • Degree of certainty for success to remediate groundwater site-wide is high because of soil removal and targeted groundwater treatment. • The City is expected to own the ROW in perpetuity, ensuring the long-term success of managing residual risk from soil contamination via a ROW contamination protocol. • The risk from groundwater contamination remaining during the restoration time frame would be monitored by routine groundwater monitoring events until compliance with CULs was achieved. • De minimis residual risk would remain due to the small degree of potential reversibility of activated carbon treatment. This risk is well managed over the long term by the addition of S-MZVI to the injected reagent, the injection of a large quantity of reagent relative to contaminant concentrations, and multiple barriers providing redundancy for plume-wide treatment.	• Alternative 3 provides a moderate to high degree of certainty of success to meet RAOs and achieve CULs within a restoration time frame of 8 to 10 years site-wide. • In situ treatment is an effective and reasonably common technology to implement and would remove contamination in groundwater. • Degree of certainty for success to remediate groundwater site-wide is moderate to high because this alternative does not include soil removal; however, aggressive in situ treatment would be implemented in the source area and downgradient. • The City is expected to own the ROW in perpetuity, ensuring the long-term success of managing residual risk from soil contamination via a ROW contamination protocol. Residual risk from soil contamination remaining on the source property would be managed by application of a zoning overlay on development. • The risk from groundwater contamination during the restoration time frame would be monitored by routine groundwater monitoring events until compliance with CULs was achieved. There is some residual risk to groundwater due to temporarily increased solubility of arsenic caused by geochemical conditions during bioremediation and production of PCE breakdown compounds during the dechlorination process (such as vinyl chloride); however, groundwater conditions are expected to equilibrate within the restoration time frame.	• Alternative 4 provides a low degree of certainty of success to meet RAOs and achieve groundwater CULs within a restoration time frame of approximately 30 years site-wide. • In situ treatment is an effective and reasonably common technology to implement and would remove source contamination in groundwater. Natural attenuation is a moderately effective natural process for the gradual degradation of contaminants in groundwater. • Degree of certainty for success to remediate groundwater site-wide is low because the majority of the cVOC plume would not be targeted by active treatment. • The City is expected to own the ROW in perpetuity, ensuring the long-term success of managing residual risk from soil contamination via a ROW contamination protocol. Residual risk from soil contamination remaining on the source property would be managed by application of a zoning overlay on development. • The risk from groundwater contamination remaining during the restoration time frame would be monitored by routine groundwater monitoring events until compliance with CULs was achieved. • Remaining risk from groundwater if concentrations remain greater than the CULs may include contingency actions such as vapor intrusion assessment to address.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

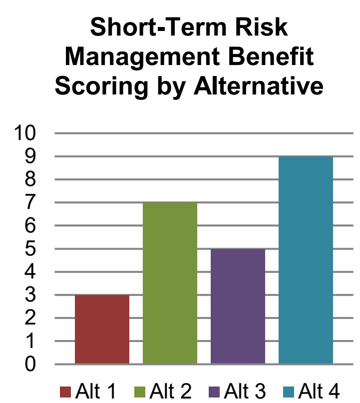
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Short-Term Risk Management • Risk to human health and the environment associated with alternative construction • The effectiveness of controls in place to manage short-term risks  	• Alternative 1 has a moderate short-term risk to human health and the environment during implementation. Remaining contaminated soil does not exceed screening levels for worker protection; however, there are residual risks to human health and the environment posed by excavation, shoring, handling and transport of contaminated soil. These risks would be managed by proper BMPs, worker H&S protocols, and site security. • This alternative would require the largest amount of truck trips to haul contaminated soil, increasing risks due to traffic. • There is some risk for public exposure with this alternative due to increased traffic associated with contaminated soil transportation from the site for disposal over public roadways; however, the excavated soil would be managed by licensed professionals at a permitted landfill. • There is a low risk to site workers during handling of liquid activated carbon and S-MZVI for injection. • Injection in the ROW poses a risk to workers and the public due to working in the roadway and on private business properties and may also increase the risk of traffic collisions due to detours. Alternative 1 requires more work in the ROW than Alternative 2, but less than Alternative 3. • Site activities would require appropriate PPE, BMPs, site controls to restrict site access, traffic control, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.	• Alternative 2 has a low to moderate short-term risk to human health and the environment during implementation. Remaining contaminated soil does not exceed screening levels for worker protection; however, there are residual risks to human health and the environment posed by excavation, shoring, handling, and transport of contaminated soil. These risks would be managed by proper BMPs and site security. • This alternative would include truck trips to haul contaminated soil, increasing risks due to traffic. Fewer truck trips are required for this alternative than for Alternative 1. • There is some risk for public exposure with this alternative due to increased traffic associated with contaminated soil transportation from the site for disposal over public roadways; however, the excavated soil would be managed by licensed professionals at a permitted landfill. • There is a low risk to site workers during handling of liquid activated carbon and S-MZVI for injection. • Injection in the ROW poses a risk to workers and the public due to working in the roadway and on private business properties and may also increase the risk of traffic collisions due to detours. Alternative 2 requires less work in the ROW and on private properties than Alternatives 1 and 3. • Site activities would require appropriate PPE, BMPs, site controls to restrict site access, traffic control, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.	• Alternative 3 has moderate short-term risk to human health and the environment during implementation primarily due to a substantial amount of ROW work and injections on private properties. Risks would be managed by proper H&S procedures and site security. • This alternative would not involve handling of contaminated soil. • There is a low risk to site workers during handling of edible oil substrates for injection. • Injection in the ROW poses a risk to workers and the public due to working in the roadway and on private business properties and may also increase the risk of traffic collisions due to detours. Alternative 3 requires significantly more work in the ROW and on private business properties than Alternatives 1 and 2. • Site activities would require appropriate PPE, BMPs, site controls to restrict site access, traffic control, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.	• Alternative 4 has the lowest short-term risk to human health and the environment during implementation. • This alternative would not involve handling of contaminated soil or work in the ROW. • There is a low risk to site workers during handling of liquid-activated carbon and S-MZVI for injection. • This alternative includes the most groundwater monitoring, which poses limited risk to workers when sampling wells located in the ROW. • Site activities would require appropriate PPE, BMPs, site controls to restrict site access, and appropriate training requirements for management of risk. These controls are highly effective and anticipated to adequately manage short-term risk.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

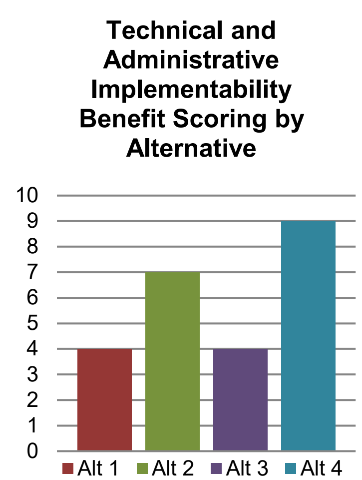
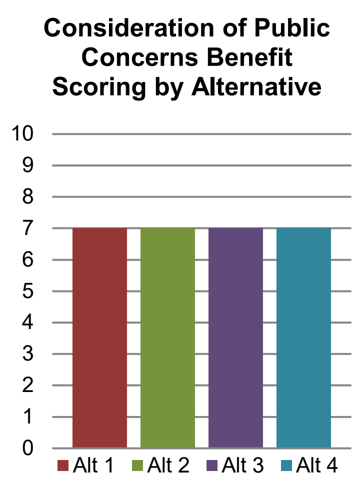
Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Technical and Administrative Implementability *Ability of alternative to be implemented considering the following:* • Technical possibility • Availability of off-site facilities, services, and materials • Administrative and regulatory requirements • Schedule, size, and complexity of construction • Monitoring requirements • Site access for construction, operations, and monitoring • Integration with existing site operations or other current and potential future remedial action 	• Alternative 1 is the second largest in scale and includes the most technical construction elements. Excavation with shoring is a common technology that can be safely implemented by many contractors in the region. In situ injection is a somewhat specialized construction element; however, many licensed drillers in the region are qualified to safely perform this work. This alternative can be implemented in a single construction season. • All necessary off-site facilities, materials, and services are available within the region. • Site access is moderately difficult for work in the ROW, which would require multiple lane closures of arterial roadway for some portions of remedy implementation. Injection work on private business properties would require access and coordination and would disrupt access to certain portions of the properties, which may temporarily disrupt business. • Monitoring requirements include protection monitoring for workers during construction, performance monitoring during excavation, and injection and groundwater monitoring following implementation. • This alternative would not impede current or future property use or preclude potential future remedial action.	• Alternative 2 is the third largest in scale and includes some technical construction elements. Excavation with shoring is a common technology that can be safely implemented by many contractors in the region. In situ injection is a somewhat specialized construction element; however, many licensed drillers in the region are qualified to safely perform this work. This alternative can be implemented easily in a single construction season. • All necessary off-site facilities, materials, and services are available within the region. • Site access is moderately difficult for work in the ROW and on private properties; however, this alternative requires minimal lane closures and private property disruption during remedy implementation. • Monitoring requirements include protection monitoring for workers during construction, performance monitoring during excavation and injection, and groundwater monitoring following implementation. • A ROW contamination protocol would be maintained for remaining contaminated soil in the ROW. • This alternative would not impede current or future property use or preclude potential future remedial action.	• Alternative 3 is the largest in scale. In situ injection is a somewhat specialized construction element; however, many licensed drillers in the region are qualified to safely perform this work. This alternative can be implemented in a single construction season. • All necessary off-site facilities, materials, and services are available within the region. • Site access is moderately difficult for work in the ROW, which would require multiple lane closures of arterial roadway for some portions of remedy implementation. Injection work on private business properties would require access and coordination and would disrupt access to certain portions of the properties, which may temporarily disrupt business. • Monitoring requirements include performance monitoring during injection and groundwater monitoring following implementation. • A ROW contamination protocol would be maintained for remaining contaminated soil in the ROW. A zoning overlay on development would be maintained for remaining contaminated soil on the source property. • This alternative would not impede current property use and cause minimal impediment to future property use. This alternative would not preclude potential future remedial action.	• Alternative 4 is the smallest in scale. In situ injection is a somewhat specialized construction element; however, many licensed drillers in the region are qualified to safely perform this work. This alternative can be implemented easily in a single construction season. • All necessary off-site facilities, materials, and services are available within the region. • Monitoring requirements include performance monitoring during injection and groundwater monitoring following implementation. • A ROW contamination protocol would be maintained for remaining contaminated soil in the ROW. A zoning overlay on development would be maintained for remaining contaminated soil on the source property. • This alternative would not impede current property use and cause minimal impediment to future property use. This alternative would not preclude potential future remedial action.

Table 11.1
Disproportionate Cost Analysis Alternative Evaluation

Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Consideration of Public Concerns • Whether the community has concerns • Degree to which the alternative addresses those concerns 	• Alternative 1 addresses public concerns regarding contaminated groundwater impacts to private property with aggressive groundwater treatment. • Disturbance to private business and traffic impacts are also expected to be of concern to the City and the public. Alternative 1 involves a high degree of temporary disturbance to private business operations and moderate to high traffic impacts due to trucking and lane closures during remedy implementation. • Public concerns will be reviewed following the public comment period and will be addressed as part of the final remedial alternative selection and design. All alternatives are scored equally pending public comment.	• Alternative 2 addresses public concerns regarding contaminated groundwater impacts to private property with targeted groundwater treatment. • Disturbance to private business and traffic impacts are also expected to be of concern to the City and the public. Alternative 2 involves a minimal amount of temporary disturbance to private business and moderate amount traffic impacts due to trucking and lane closures during remedy implementation. • Public concerns will be reviewed following the public comment period and will be addressed as part of the final remedial alternative selection and design. All alternatives are scored equally pending public comment.	• Alternative 3 addresses public concerns regarding contaminated groundwater impacts to private property with aggressive groundwater treatment. • Disturbance to private business and traffic impacts are also expected to be of concern to the City and the public. Alternative 3 involves a moderate to high degree of temporary disturbance to private business operations and the highest degree of traffic impacts due to lane closures during remedy implementation. • Public concerns will be reviewed following the public comment period and will be addressed as part of the final remedial alternative selection and design. All alternatives are scored equally pending public comment.	• Alternative 4 addresses public concerns regarding contaminated groundwater impacts to private property with groundwater source treatment and monitored natural attenuation. This alternative is less responsive to public concern than Alternatives 1, 2, and 3, which include more aggressive treatment downgradient where private properties are located. • Disturbance to private business and traffic impacts are also expected to be of concern to the City and the public. Alternative 4 does not impact private business operations and does not require lane closures except for limited time periods required for groundwater monitoring at some well locations. • Public concerns will be reviewed following the public comment period and will be addressed as part of the final remedial alternative selection and design. All alternatives are scored equally pending public comment.
Cost	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
• Cost of construction • Long-term monitoring, operations, and maintenance costs • Agency oversight costs	Total cost: $2,100,000 • Includes construction, long-term monitoring, and agency oversight costs • Includes tax • Includes 25% contingency	Total cost: $1,600,000 • Includes construction, long-term monitoring, and agency oversight costs • Includes tax • Includes 25% contingency	Total cost: $2,800,000 • Includes construction, long-term monitoring, and agency oversight costs • Includes tax • Includes 25% contingency	Total cost: $1,500,000 • Includes construction, long-term monitoring, and agency oversight costs • Includes tax Includes 25% contingency

Abbreviations:

AOC	Area of concern
BMP	Best management practice
cVOC	Chlorinated volatile organic compound
CUL	Cleanup level
H&S	Health and safety
IC	Institutional control
O&M	Operations and management
PPE	Personal protective equipment
SL	Screening level
S-MZVI	Sulfidated micro zero-valent iron

Table 11.2
Disproportionate Cost Analysis Summary

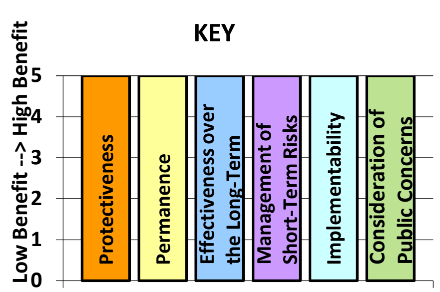
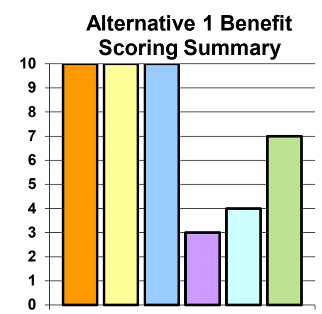
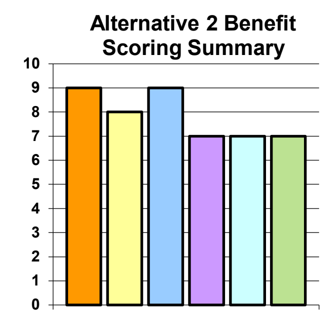
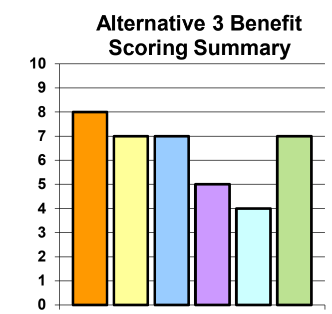
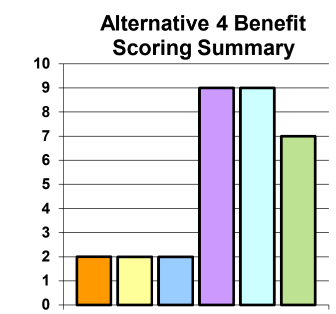
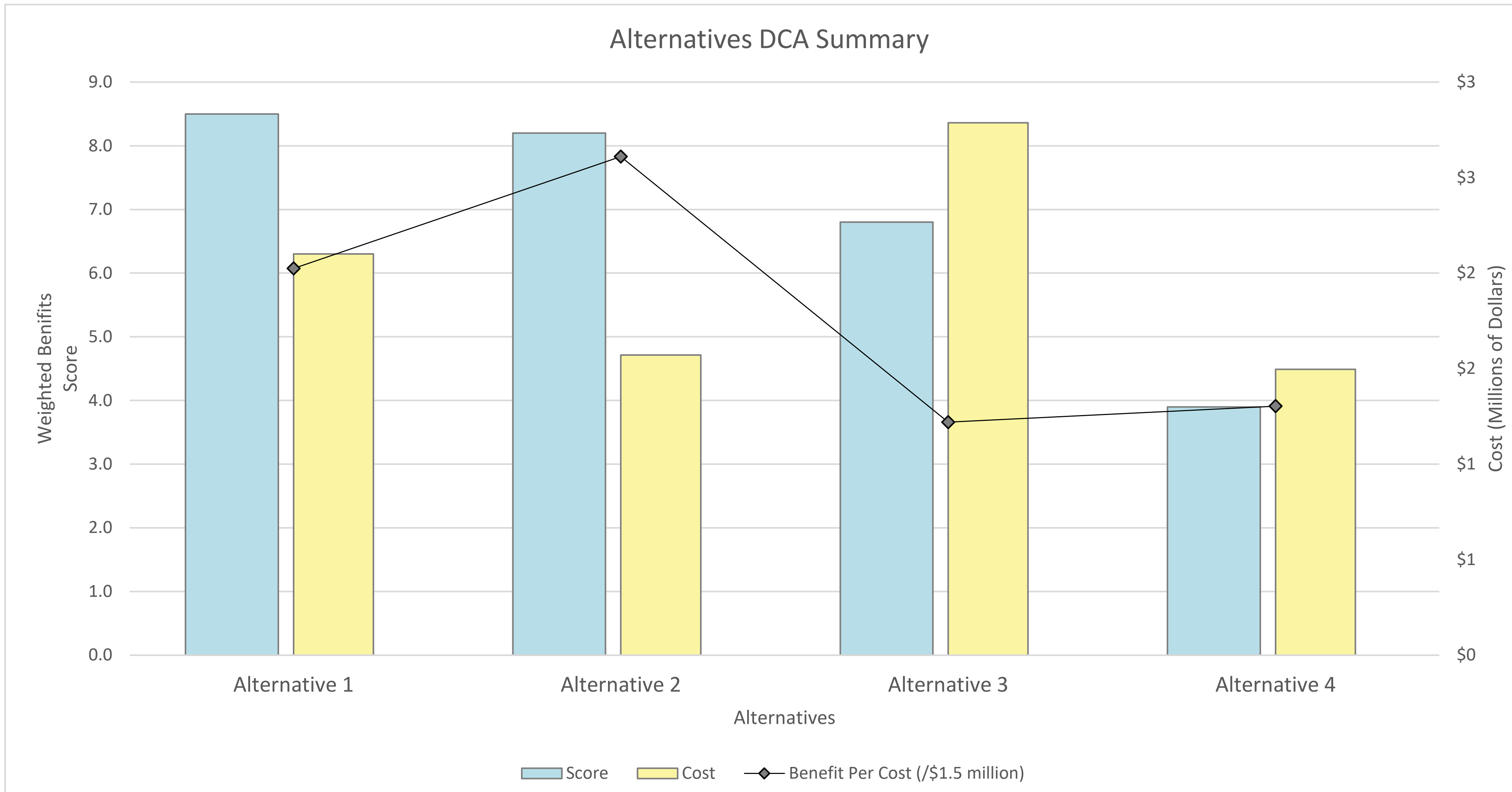
Alternative	Alternative 1 Soil Excavation and Plume-Wide Activated Carbon and S-MZVI Injection Barriers	Alternative 2 Source Area Excavation and Targeted Activated Carbon and S-MZVI Injection Barriers	Alternative 3 In-Situ Bioremediation Treatment Zones	Alternative 4 Source Area Treatment and Monitored Natural Attenuation
Alternative Description	Alternative 1 includes: (1) Excavation to remove soil exceeding CULs Site-wide (2) Source Area cVOC AOC groundwater treatment with activated carbon and S-MZVI in situ injection (3) In situ groundwater treatment by injection of activated carbon and S-MZVI in six equally spaced barriers along the length and width of the cVOC groundwater plume in the Shallow and Deep Groundwater cVOC AOCs	Alternative 2 includes: (1) Excavation to remove cVOC contaminated soil exceeding CULs on the Source Property cVOC AOC (2) Source area groundwater treatment with S-MZVI soil mixing in the deep excavation on the Source Property cVOC AOC (3) In situ groundwater treatment by injection of activated carbon and S-MZVI in five focused barriers along the length of the cVOC groundwater plume in the Shallow and Deep Groundwater cVOC AOCs (4) Institutional controls	Alternative 3 includes: (1) In situ groundwater treatment using emulsified vegetable oil substrate to enhance bioremediation in three zones including the Source Property cVOC AOC, and the Shallow and Deep Groundwater cVOC AOCs (2) Institutional controls	Alternative 4 includes: (1) In situ groundwater treatment in the Source Property cVOC AOC by injecting activated carbon and S-MZVI (2) Monitored natural attenuation of cVOCs in groundwater (3) Contingency soil vapor assessment (4) Institutional controls
				
Complies with MTCA Threshold Requirements	Yes	Yes	Yes	Yes
Restoration Time Frame (to achieve CULs in groundwater at CPOC)	4 to 5 Years	6 to 8 Years	8 to 10 Years	30+ Years
Protectiveness (30%)	10	9	8	2
Permanence (20%)	10	8	7	2
Effectiveness over the Long Term (20%)	10	9	7	2
Management of Short-Term Risks (10%)	3	7	5	9
Technical and Administrative Implementability (10%)	4	7	4	9
Consideration of Public Concerns (10%) (1)	7	7	7	7
Total Weighted Benefit Score (Relative Benefit Ranking)	**8.4**	**8.3**	**6.8**	**3.9**
Estimated Total Alternative Cost (2)	$2.1 million	$1.6 million	$2.8 million	$1.5 million
Benefit per Unit Cost Ratio (3)	**6.00**	**7.83**	**3.66**	**3.91**
Costs Disproportionate to Incremental Benefits	No	No	No	No
Overall Alternative Ranking	**2**	**1**	**4**	**3**

Table 11.2
Disproportionate Cost Analysis Summary



Notes:
1 Scores for Consideration of Public Concerns were assumed to be equal for all alternatives pending public comment.
2 Specific cost estimate information is provided in Appendix D.
3 Benefit per Unit Cost Ratio calculated by dividing the Total Weighted Benefit Score by the Estimated Total Alternative Cost (standardized by divided by $1.5 million). Higher value indicates the most benefit per unit cost.

Abbreviations:
AOC Area of concern
CUL Cleanup level
CPOC Conditional point of compliance
cVOC Chlorinated volatile organic compound
DCA Disproportionate cost analysis
MTCA Model Toxics Control Act
S-MZVI Sulfidated micro zero-valent iron

Table 12.1
Potential Location-Specific ARARs for the Site

Standard, Requirement, or Limitation	Description	Applicability
Downtown Subarea Regulations		
City of Bothell—Downtown Subarea Regulations (BMC Chapter 14.04)	Implements the requirements imposed on the City of Bothell to guide private and public investment activities and support the growth and continued revitalization of Bothell's downtown.	Applicable.
Shoreline, Wetlands, and other Critical Areas		
Washington Shoreline Management Act (RCW 90.58; WAC 173-14)	The Washington Shoreline Management Act, authorized under the federal Coastal Zone Management Act, establishes requirements for substantial development occurring within the waters of Washington State or within 200 feet of a shoreline.	Not applicable, as the Site is more than 200 feet from the Sammamish River and North Creek.
City of Bothell—Shoreline Master Program (BMC Title 13)	Implements the requirements imposed on the City of Bothell by the Washington Shoreline Management Act (RCW 90.58) and ensures that development under the program will not cause a net loss of ecological functions.	Not applicable as the Site is outside of the zone managed by this plan.
City of Bothell—Critical Areas Regulations (BMC Chapter 14.04)	This chapter establishes regulations pertaining to the development within or adjacent to critical areas, which include areas that provide a variety of biological and physical functions that benefit the City of Bothell and its residents, including water quality protection, fish and wildlife habitat, food chain support, etc.	Not applicable; areas of the Site regulated by City of Bothell are not within a critical area.
Executive Order 11990, Protection of Wetlands (40 CFR 6, Appendix A)	Executive Order 11990 Section 7 requires measures to minimize the destruction, loss, or degradation of wetlands. Requires no net loss of remaining wetlands.	Not applicable; the Site is not within designated wetlands.
Flood Plain Management 40 CFR 6, Appendix A: 10 CFR 1022 and FEMA requirements	In 100-year flood plains, actions must be taken to reduce the risk of flood loss, minimize the impact of floods on human safety, and restore and preserve the natural beneficial values of flood plains.	Not applicable; the Site is not located within a designated floodplain.
Washington Floodplain Management Plan RCW 68.16; WAC 173-158	An advisory standard pertaining to wetlands management that suggests local governments, with technical assistance from WSDOE, institute a program that can identify and map critical wetland areas located within base floodplains.	
Cultural Resources		
Native American Graves Protection and Repatriation Act (25 USC 3001 through 3113; 43 CFR Part 10) Washington's Indian Graves and Records Law (RCW 27.44)	These statutes prohibit the destruction or removal of Native American cultural items and require written notification of inadvertent discovery to the appropriate agencies and Native American tribe. These programs are applicable to the remedial action if cultural items are found. The activities must cease in the area of the discovery; a reasonable effort must be made to protect the items discovered; and notice must be provided.	Applicable.
Archaeological Resources Protection Act (16 USC 470aa et seq.; 43 CFR part 7)	This program sets forth requirements that are triggered when archaeological resources are discovered. These requirements only apply if archaeological items are discovered during implementation of the selected remedy.	
National Historic Preservation Act (16 USC 470 et seq.; 36 CFR parts 60, 63, and 800)	This program sets forth a national policy of historic preservation and provides a process that must be followed to ensure that impacts of actions on archaeological, historic, and other cultural resources are protected.	

Abbreviations:

ARAR	Applicable or Relevant and Appropriate Requirement
BMC	Bothell Municipal Code
CFR	Code of Federal Regulations
FEMA	Federal Emergency Management Agency
RCW	Revised Code of Washington
Site	Ultra Custom Care Cleaners Site
USC	United States Code
WAC	Washington Administrative Code
WSDOE	Washington State Department of Ecology

Table 12.2
Potential Action-Specific ARARs for the Site

Standard, Requirement, or Limitation	Description	Applicability
Evaluate Environmental Impacts		
SEPA Rules (RCW 43.21C, WAC 197-11)	Establishes the state's policy for protection and preservation of the natural environment.	Applicable; implemented during design and permitting phase. Coordination with federal agencies may be necessary to ensure the SEPA process will meet NEPA requirements. SEPA and MTCA are integrated processes per WAC 197-11-250 through 197-11-268.
Construction and Maintenance of Wells		
Washington Administrative Code: UIC Program (WAC 173-218)	Establishes requirements to protect groundwater by regulating the discharge of fluids from injection wells. The UIC program is administered under Title 40 CFR parts 144, 145, 146, and 147 and authorized by the SDWA.	Applicable if selected alternative includes injection of fluids into the subsurface.
Washington Administrative Code: Minimum Standards for Construction and Maintenance of Wells (WAC 173-160)	Establishes requirements for construction, abandonment, and decommissioning of monitoring wells and soil borings.	Applicable.
Washington Administrative Code: Regulation and Licensing of Well Contractors and Operators (WAC 173-162)	Establishes requirements for licensing and training well contractors and operators.	Applicable.
Upland Disposal of Investigation Derived Waste		
Resource Conservation and Recovery Act (42 USC 6921-6949a; 40 CFR Part 268, Subtitles C and D)	Establishes requirements for the identification, handling, and disposal of hazardous and nonhazardous waste.	Applicable if waste is generated from selected alternative.
Dangerous Waste Regulations (RCW 70.105; WAC 173-303)	Establishes regulations that are the state equivalent of RCRA requirements for determining whether a waste is a state dangerous waste. This regulation also provides requirements for the management of dangerous wastes.	Applicable only if waste is generated from selected alternative.
Solid Waste Disposal Act (42 USC Sec. 325103259, 6901-6991; 40 CFR 257,258) Federal Land Disposal Requirements (40 CFR part 268)	Protects health and the environment and promotes conservation of valuable material and energy resources.	Applicable only if solid waste is generated from selected alternative.
Minimum Functional Standards for Solid Waste Handling (WAC 173-304)	Sets minimum functional standards for the proper handling of all solid waste materials originating from residences, commercial, agricultural, and industrial operations as well as other sources.	Applicable only if solid waste is generated from selected alternative.
Solid Waste Handling Standards (WAC 173-350 and WAC 173-351)	Establishes minimum standards for handling and disposal of solid waste. Solid waste includes wastes that are generated by site remediation, including contaminated soils, construction and demolition wastes, and garbage. Soils classified as “contained-in-waste” must be delivered to a solid waste landfill permitted under WAC 173-351 inside Washington State.	Applicable only if solid waste and contained-in-waste are generated from selected alternative.

Table 12.2
Potential Action-Specific ARARs for the Site

Standard, Requirement, or Limitation	Description	Applicability
Construction Grading		
City of Bothell—Municipal Code for Utilities and Infrastructure: Grading (BMC Chapter 18.05)	The provisions of the grading chapter (18.05) apply to grading, excavation, and earthwork construction, including fills and embankments. No grading should be performed without obtaining a permit from the City of Bothell.	Substantive requirements are applicable if the selected alternative includes excavation or grading of soils. MTCA remedial actions are exempt from the procedural requirements of this law but must comply with the substantive requirements.
Wastewater/Stormwater Discharge		
Water Pollution Control / State Waste Discharge Permit Program / NPDES Permit Program RCW 90.48; WAC 173-216, WAC 173-220 NPDES (CWA Part 402)	Washington State has been delegated authority to issue NPDES permits. CWA Section 301, 302, and 303 require states to adopt water quality standards and implement a NPDES permitting process. The Washington Water Pollution Control Law and regulations address this requirement.	State version of CWA NPDES. Substantive requirements are applicable. MTCA remedial actions are exempt from the procedural requirements of this law but must comply with the substantive requirements. Any construction or regrading activity will require compliance with NPDES.
King County Industrial Waste Program	The King County Industrial Waste Program monitors discharge of liquid waste to the wastewater (sanitary sewer) system. Any discharges during construction to the wastewater system must be approved by King County prior to discharge. The King County Industrial Waste Program monitors volume and water quality of liquid waste discharged to the system.	Applicable to any wastewater (dewatering water, stormwater, etc.) discharged to the sanitary sewer system during remedy implementation.
Worker Safety		
Occupational Health and Safety Standards: Hazardous Waste Operations and Emergency Response/General Occupational Health Standards (Health and Safety 29 CFR 1901.120; and WAC 296-62)	The HAZWOPER standard regulates health and safety operations for hazardous waste sites. The health and safety regulations describe federal requirements for health and safety training for workers at hazardous waste sites.	Any cleanup work will require compliance with OSHA and WISHA.
Occupational Safety and Health Act (29 USC 653, 655, 657) Occupational Safety and Health Standards (29 CFR 1910)	Employee health and safety regulations for construction activities and general construction standards as well as regulations for fire protection, materials handling, hazardous materials, personal protective equipment, and general environmental controls. Hazardous waste site work requires employees to be trained prior to participation in site activities, medical monitoring, monitoring to protect employees from excessive exposure to hazardous substances, and decontamination of personnel and equipment.	Any cleanup work will require compliance with OSHA and WISHA.
Washington Industrial Safety and Health Act (RCW 49.17) Washington Safety Standards for Construction Work/General Occupational Health Standards (WAC 296-62, WAC 296-155)	Adopts the OSHA standards that govern the conditions of employment in all workplaces. The regulations encourage efforts to reduce safety and health hazards in the workplace and set standards for safe work practices for dangerous areas such as trenches, excavations, and hazardous waste sites.	Any cleanup work will require compliance with OSHA and WISHA.

Table 12.2
Potential Action-Specific ARARs for the Site

Standard, Requirement, or Limitation	Description	Applicability
Air Quality Controls		
Federal, State, and Local Air Quality Protection Programs State Implementation of Ambient Air Quality Standards NWAPA Ambient and Emission Standards Regional Standards for Fugitive Dust Emissions Toxic Air Pollutants	Regulations promulgated under the federal Clean Air Act (42 USC 7401) and the Washington State Clean Air Act (RCW 70.94) govern the release of airborne contaminants from point and non-point sources. Local air pollution control authorities such as the PSCAA have also set forth regulations for implementing these air quality requirements. These requirements may be applicable to the Site for the purposes of dust control should the selected remedial alternatives require excavation activities. WAC 173-340-750 establishes air cleanup standards, which applies to concentrations of hazardous substances in the air originating from a remedial action at the Site.	The selected alternative will require compliance with air quality regulations and BMPs for dust control.
Miscellaneous		
Noise Control Act of 1974/Maximum Environmental Noise Levels (RCW 70.107, WAC 173-60)	Establishes maximum noise levels.	The selected alternative will need to comply with local and state noise pollution requirements. Construction and other activities will need to be limited to normal working hours.
National Electrical Code (NFPA 70) and the Seattle Electric Code Supplement for Class 1 Division 2 Environments.	Establishes restrictions and guidelines for temporary and/or permanent electrical installations.	Compliance required should the selected alternative require temporary electrical power.

Abbreviations:

ARAR	Applicable or Relevant Appropriate Requirement
BMC	Bothell Municipal Code
BMP	Best management practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
HAZWOPER	Health and Safety for Hazardous Waste Operations and Emergency Management
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NWAPA	Northwest Air Pollution Authority
OSHA	Occupational Safety and Health Act
PSCAA	Puget Sound Clean Air Authority
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
SDWA	Safe Drinking Water Act
SEPA	State Environmental Policy Act
Site	Ultra Custom Care Cleaners Site
UIC	Underground Injection Control
USC	United States Code
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WISHA	Washington Industrial Safety and Health Act

Table 12.3
Potential Chemical-Specific ARARs for the Site

Standard, Requirement, or Limitation	Description	Applicability
Groundwater Requirements		
Model Toxics Control Act (WAC 173-340)	Establishes Washington State administrative processes and standards to identify, investigate, and clean up facilities where hazardous substances are located.	Site is regulated under MTCA and must meet MTCA standards. Cleanup levels must consider beneficial use of groundwater, which is impact to surface water.
Drinking Water Standards—State MCLs (WAC 246-290-310)	Establishes standards for contaminant levels in drinking water for water system purveyors.	Highest potential future beneficial use at the Site is drinking water, therefore applicable.
Water Quality Standards for Groundwaters of the State of Washington (WAC 173-200)	Implements the Water Pollution Control Act and the Water Resources Act of 1971 (90.54 RCW).	Not applicable to sites undergoing cleanup actions under MTCA (per WAC 173-200-010(3)(c)).
National Recommended Water Quality Standards 40 CFR 131	These water quality standards define the water quality goals of the water body by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States adopt water quality standards from 40 CFR 131 to protect public health or welfare, enhance the quality of water, and serve the purposes of the CWA. Washington State water quality standards (MCLs) are presented in WAC.	Applicable.
Washington State Maximum Contaminant Levels (WAC 246-290-310)		
Soil Requirements		
MTCA (WAC 173-340)	Establishes Washington State administrative processes and standards to identify, investigate, and clean up facilities where hazardous substances are located.	Site is regulated under MTCA and must meet MTCA standards.
Air Requirements		
MTCA (WAC 173-340-750)	Establishes screening and cleanup levels to evaluate groundwater and soil vapor to indoor air risk for occupants of buildings	Site is regulated under MTCA and must meet MTCA standards.

Abbreviations:

ARAR	Applicable, Relevant, and Appropriate Requirement
CFR	Code of Federal Regulations
CWA	Clean Water Act
MCL	Maximum Contaminant Level
MTCA	Model Toxics Control Act
RCW	Revised Code of Washington
Site	Ultra Custom Care Cleaners Site
WAC	Washington Administrative Code

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Cleaners Site

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Figures

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Figure 1.1
Vicinity Map

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1/19/2021

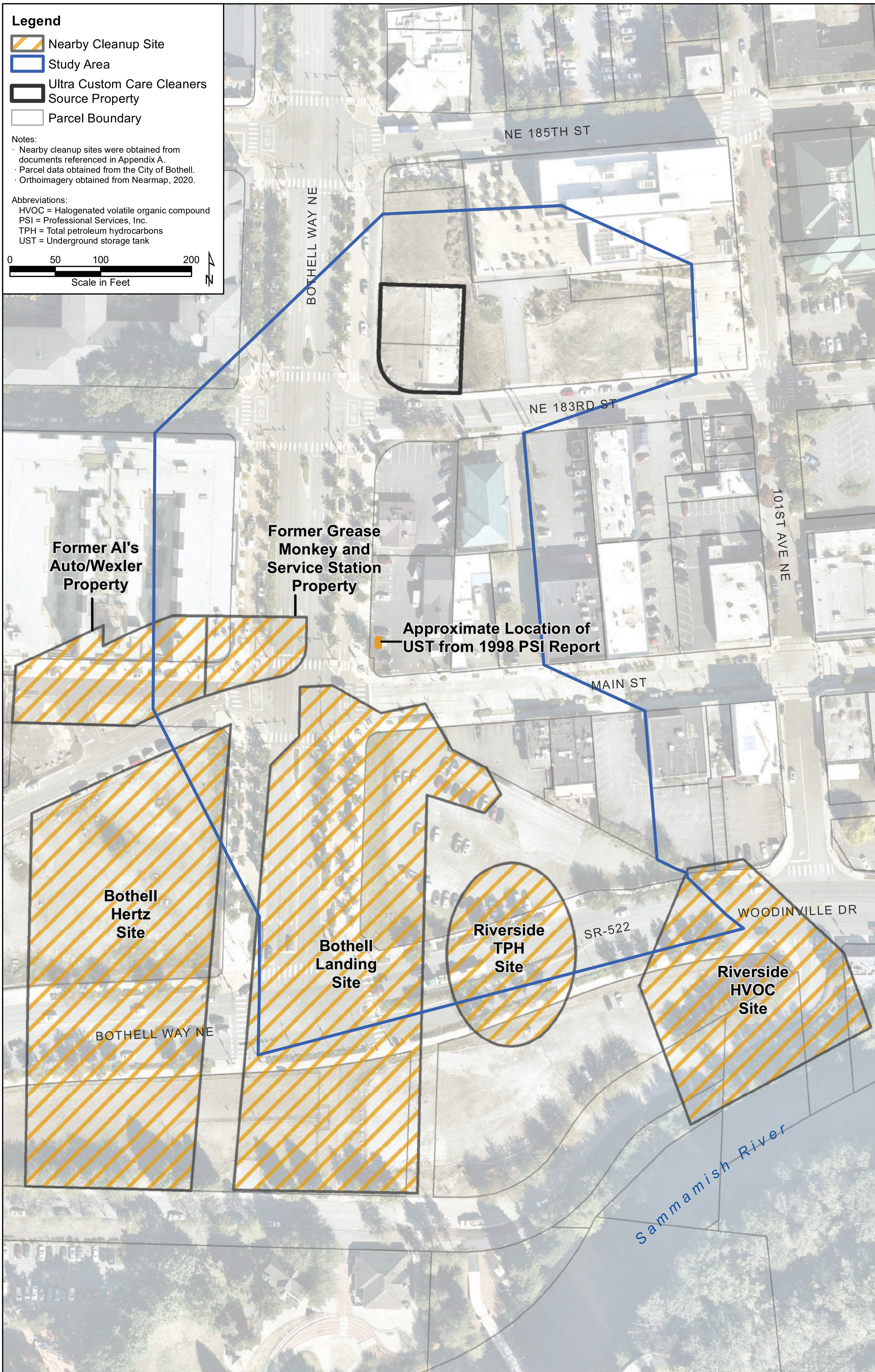

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Figure 2.1
Study Area, Adjacent Properties, and Cleanup Sites

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 2.1 Study Area, Adjacent Properties, and Cleanup Sites.mxd
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Figure 2.2
Source Property and Surrounding Property Owner-Operator Information

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6/28/2021

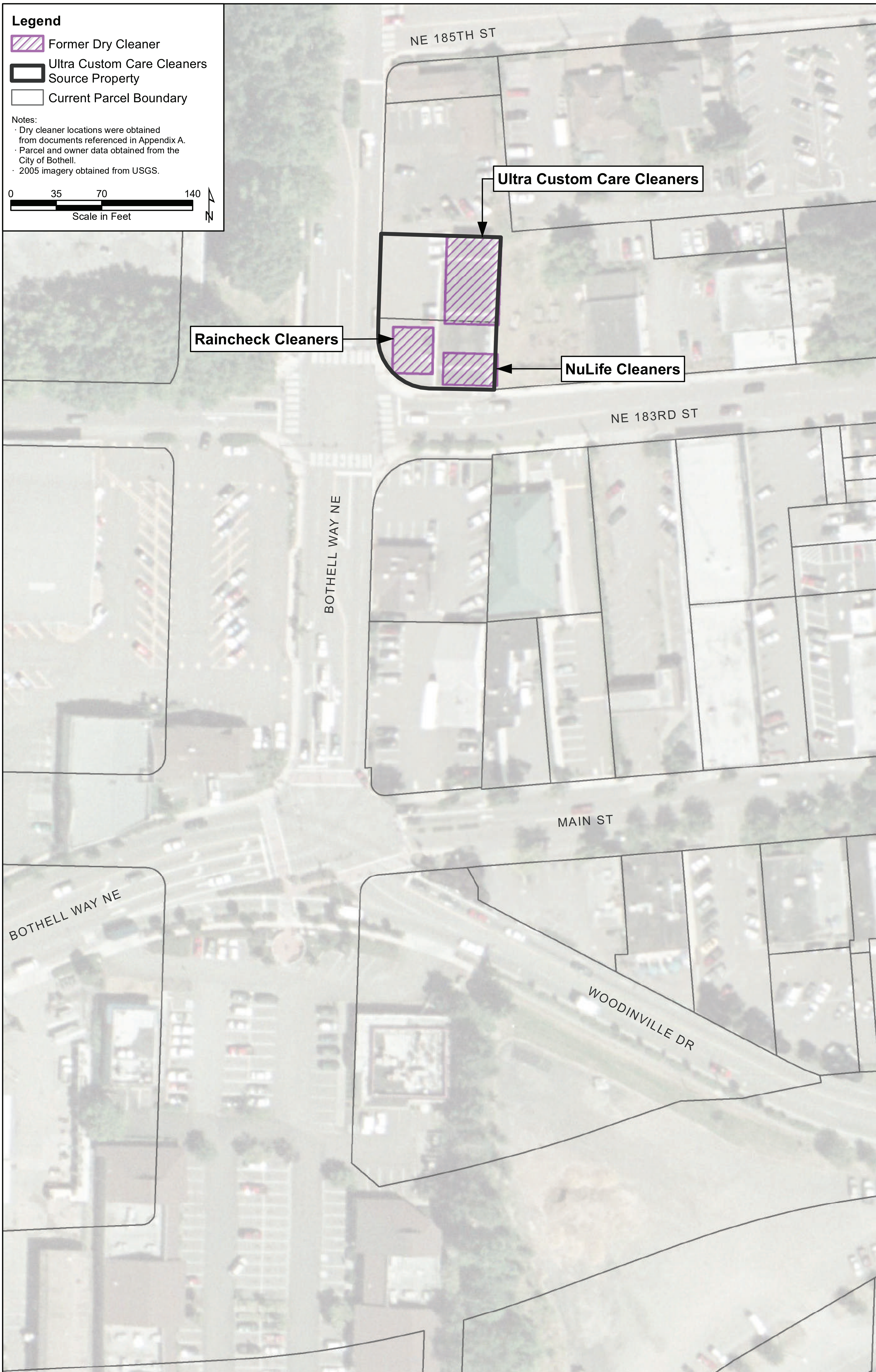

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Figure 2.3
Historical Site Features

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6/28/2021

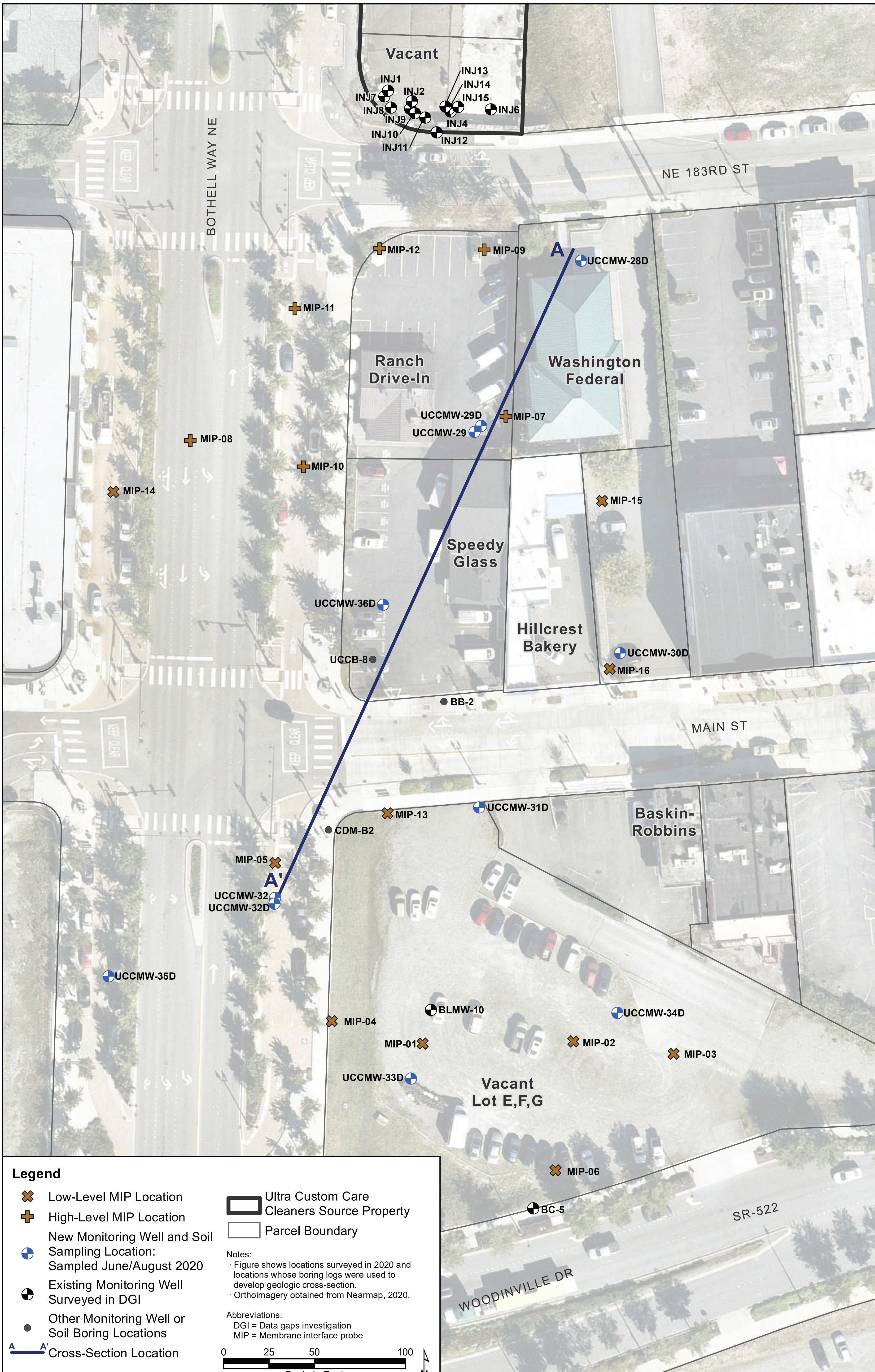

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Figure 2.4
Location of Geologic Cross-Section Line

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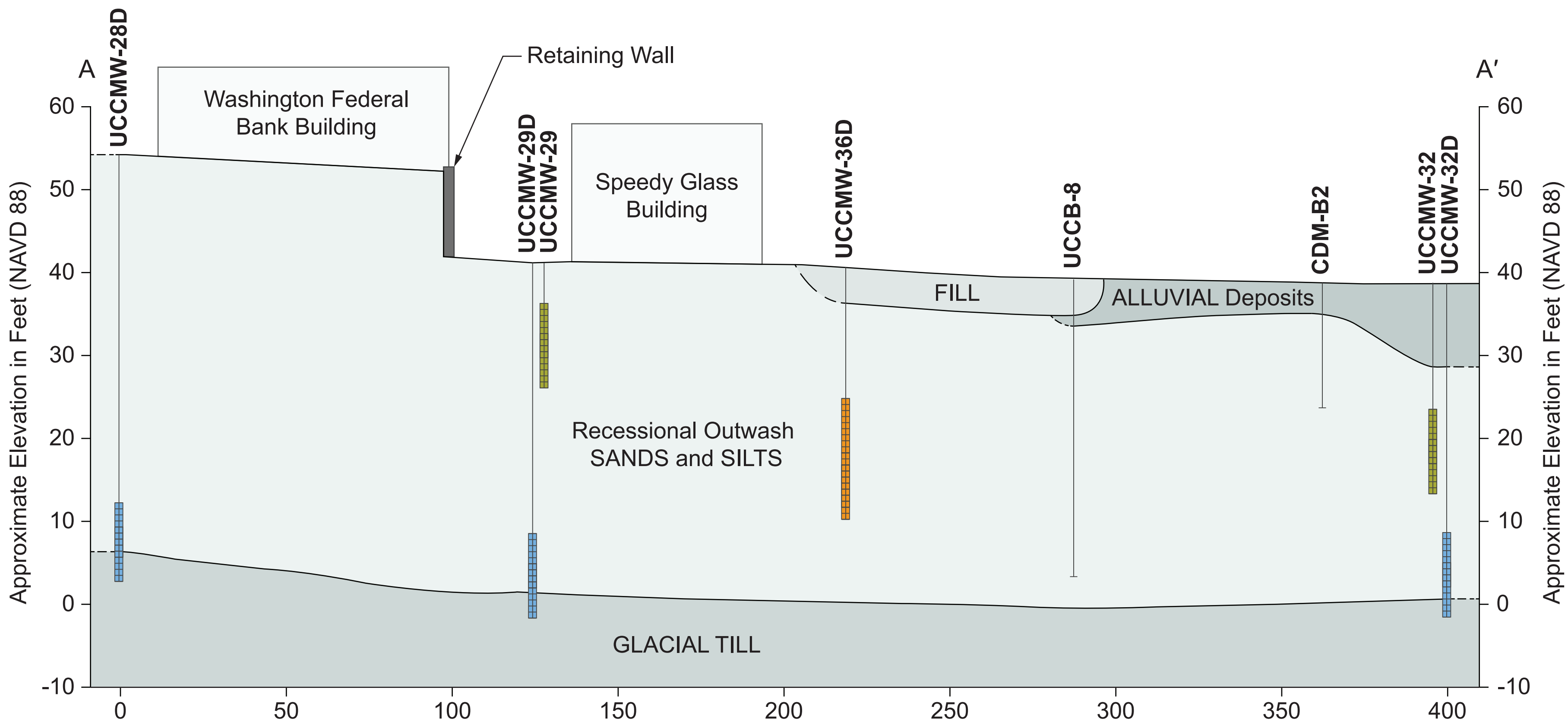
6/28/2021



Legend

Max Exceedance Factor

- ≤SL
- >2x SL
- >1x SL
- >10x SL

Contact Boundary Between Lithologies (dashed where inferred)

Note:
- Groundwater results collected in 2020 compared to screening levels presented in Table 5.1.

Abbreviations:
NAVD 88 = North American Vertical Datum of 1988
SL = Screening level

Horizontal Scale in Feet
0 50 100
0 20 40
Vertical Scale in Feet

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Figure 2.5
Geologic Cross-Section A-A′

I:\GIS\Projects\COBothell-Ultra\AI\RIFS\Figure 2.5 Geologic Cross-Section A-A'.ai
07/08/2021

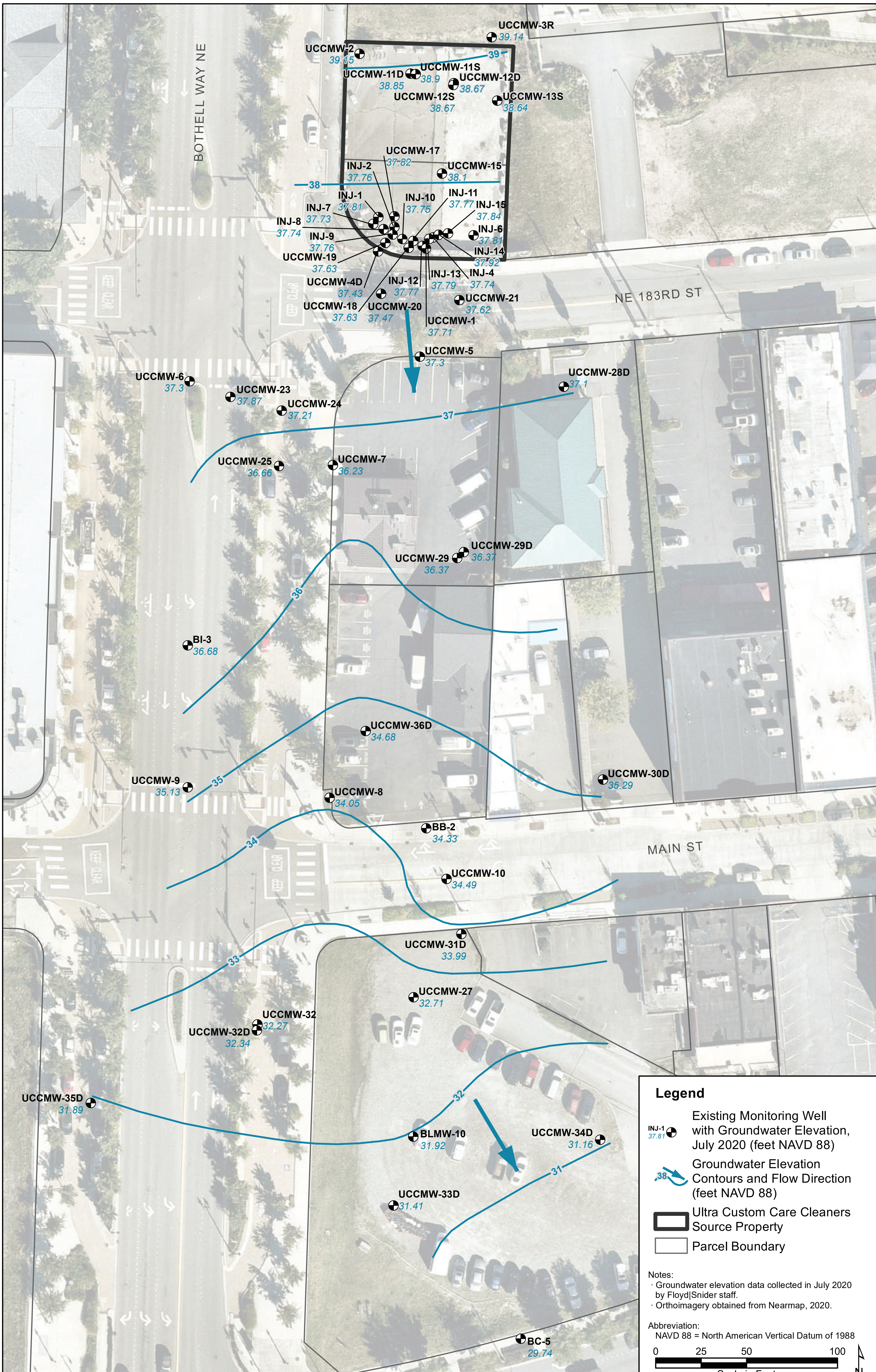

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Figure 2.6
Groundwater Elevation and Estimated Flow Direction

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 2.6 Groundwater Elevation and Estimated Flow Direction.mxd
6/28/2021

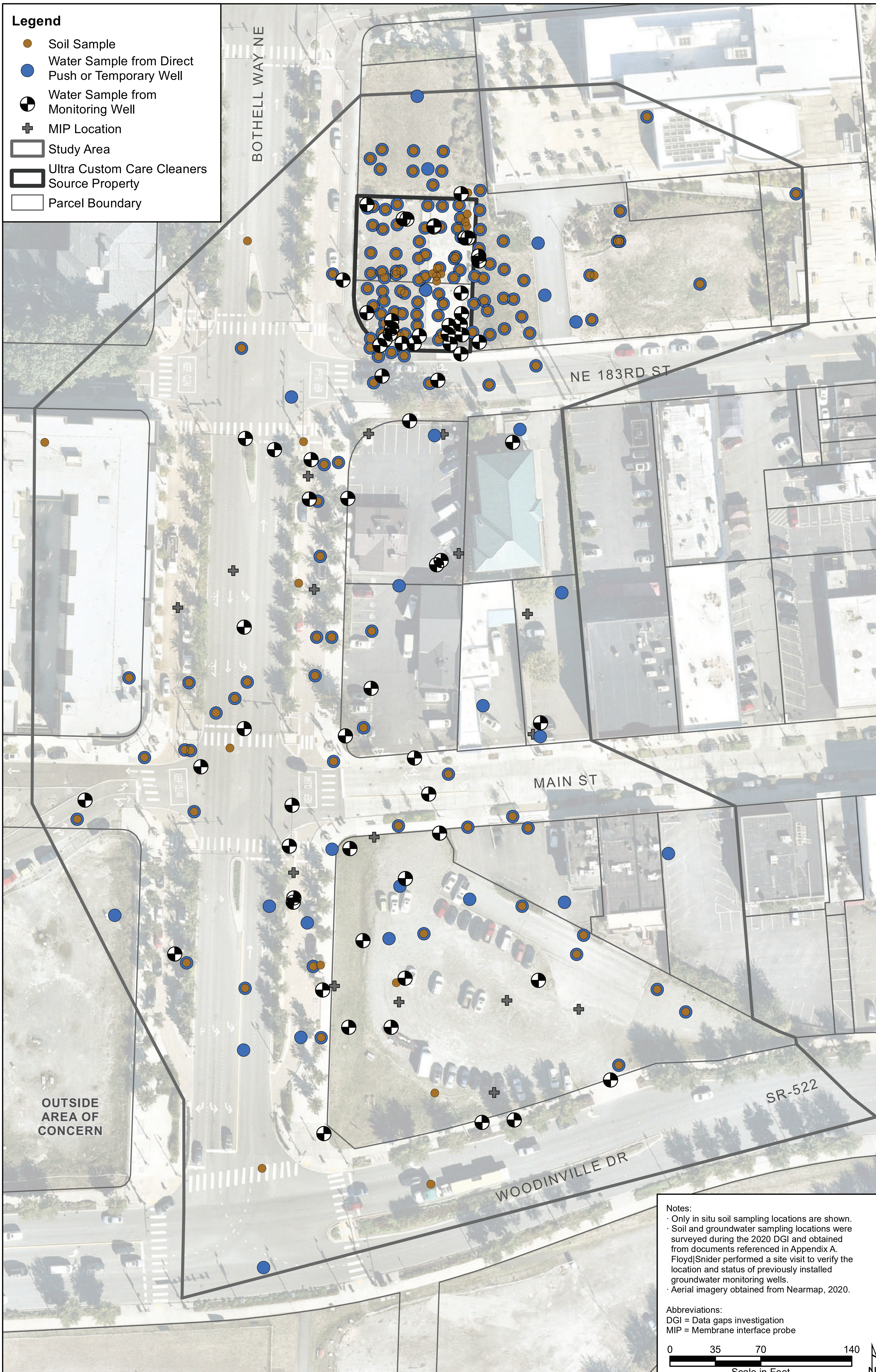

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Figure 3.1
Soil and Groundwater Sampling Locations and Membrane Interface Probe Direct Push Borings

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 3.1 Soil and Groundwater Sampling Locations and Membrane Interface Probe Direct Push Borings.mxd
6/28/2021

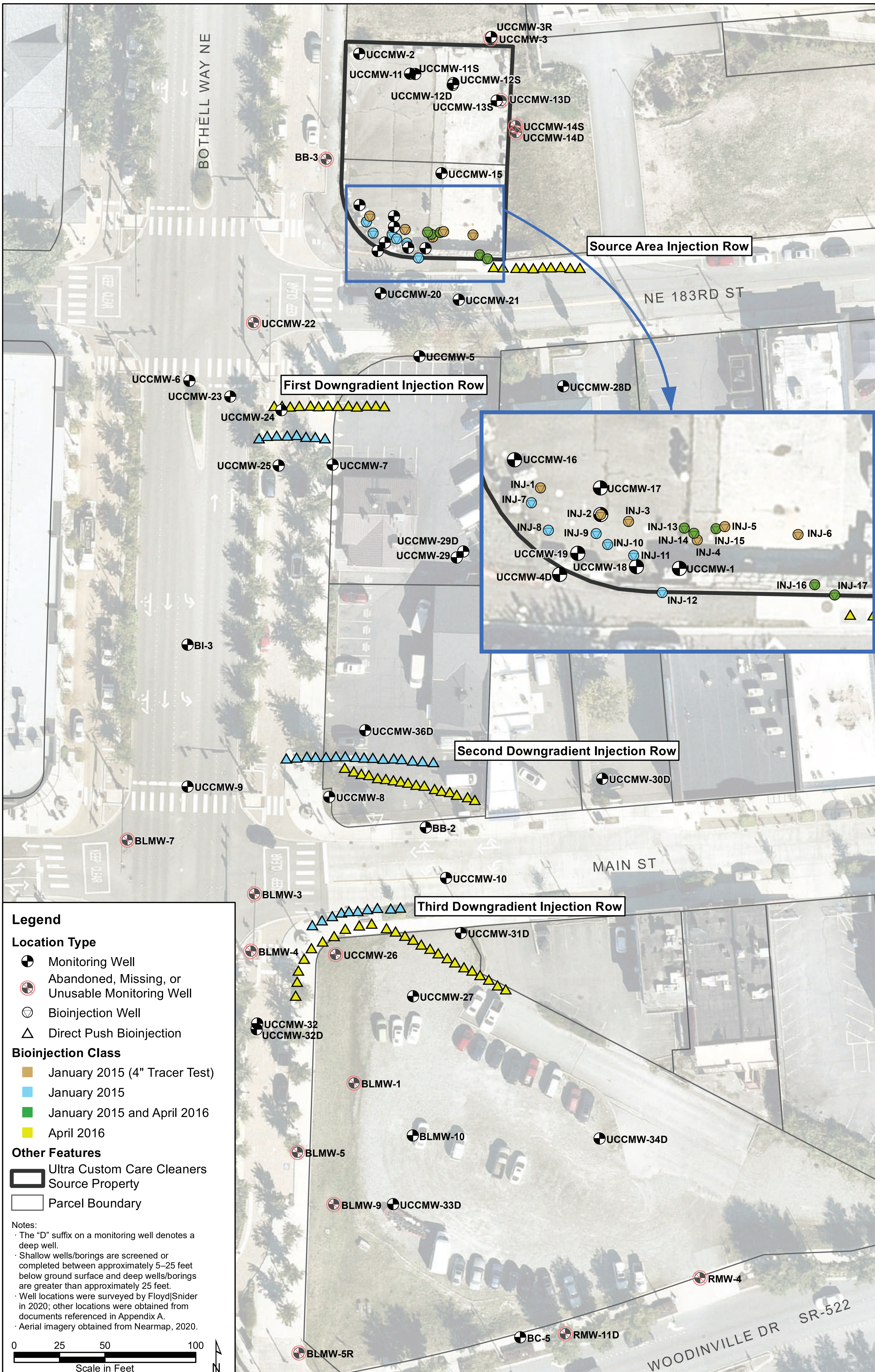

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Figure 3.2
Location of Monitoring Wells, Bioinjection Wells, and Direct Push Bioinjections

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 3.2 Location of Monitoring Wells, Bioinjection Wells, and Direct Push Bioinjections.mxd
6/28/2021

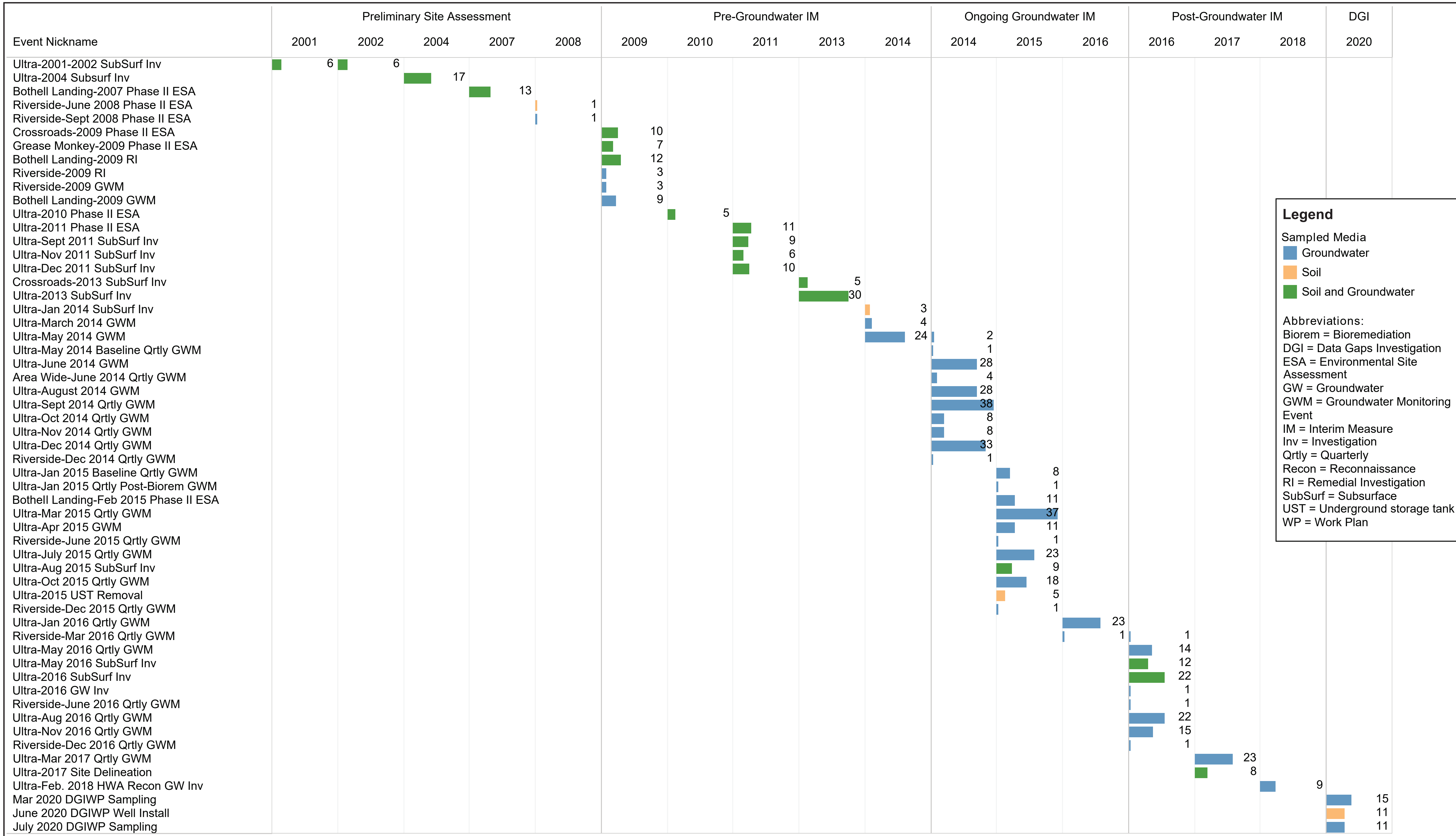

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Figure 3.3
Number of Locations Sampled in Each Sampling Event

I:\GIS\Projects\COBothell-Ultra\AI\RIFS\Figure 3.3 Number of Locations Sampled in Each Sampling Event.ai
04/07/2021

Investigation Phase	Site Nickname	Year	Number of Events	Analyte Class: VOCs	Metals	TPH	SVOCs	cVOCs
Preliminary Site Assessment	Ultra	2001	1	6				6
		2002	1	3		1	3	3
		2004	1	16	3		16	16
	Bothell Landing	2007	1	9	1	9	8	8
	Riverside	2008	1	1		1	1	1
Pre-Groundwater IM	Ultra	2010	1	4	1	3	2	2
		2011	4	29			29	29
		2013	1	30		2	30	30
		2014	2	24			24	24
	Bothell Landing	2009	2	10	7	8	10	10
	Riverside	2009	2	3	1	2	2	1
	Other Adjacent Properties/Sites	2009	1		5			
			2	17		14	15	15
		2013	1	5		1	5	5
Ongoing Groundwater IM	Ultra	2014	2		9			
			4			9		
			7				40	41
			8	40				
		2015	4		18			
			5			10	39	
			6	39				48
		2016	1	23	12		23	23
	Area-Wide	2014	1	4	3	4	4	4
	Bothell Landing	2015	1	11	3		11	11
	Riverside	2014	1	1			1	1
		2015	2	1			1	1
		2016	1					1
Post-Groundwater IM	Ultra	2016	2			11		
			4		16		23	
			6	56				54
		2017	1		12			
			2	31			31	31
		2018	1	9			9	9
	Riverside	2016	1		1			
			3	2			2	2
DGI	Ultra	2020	2	26	26			26

Legend

Notes:
1. The dataset summarized in this chart includes groundwater data collected from groundwater sampling locations shown on Figure 3.1.
2. The groundwater dataset includes data collected at properties and cleanup sites adjacent to the Ultra Custom Care Cleaners Site if these data are useful for characterization.

Number of Locations

1 14 28 42 56

Abbreviations:
cVOC = Chlorinated volatile organic compound
DGI = Data Gaps Investigation
IM = Interim Measure
RI = Remedial Investigation
SVOC = Semivolatile organic compound
TPH = Total petroleum hydrocarbons
VOC = Volatile organic compound

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Figure 3.4
Number of Groundwater Locations Sampled for Each Analyte Class, Summarized by Event

I:\GIS\Projects\COBothell-Ultra\AI\RIFS\Figure 3.4 Number of Groundwater Locations Sampled for Each Analyte Class, Summarized by Event.ai
03/19/2021

Investigation Phase	Site Nickname	Year	Number of Events	Analyte Class: VOCs	Metals	TPH	SVOCs	PCBs	cVOCs
Preliminary Site Assessment	Ultra	2001	1	4					4
		2002	1	6		1	6		6
		2004	1	13			13		13
	Bothell Landing	2007	1	7	2	9	5	1	5
Pre-Groundwater IM	Ultra	2010	1	5	1	4	2	1	2
		2011	1		1	2			
			4	19			19		19
		2013	1	30		2	30		30
		2014	1	3		3	3		3
	Bothell Landing	2009	1	4	1	4	4		3
	Other Adjacent Properties/Sites	2009	1		5				
			2	17		11	15		15
		2013	1	5		1	5		5
Ongoing Groundwater IM	Ultra	2015	1	5		5	5		
			2						14
Post-Groundwater IM	Ultra	2016	1		2				
			2	33		10			31
		2017	1	8			8		8
DGI	Ultra	2020	1	11		10			11

Legend

Notes:

1. The dataset summarized in this chart includes soil data collected from soil sampling locations shown on Figure 3.1.
2. The soil dataset includes data collected to at properties and cleanup sites adjacent to the Ultra Custom Care Cleaners Site if these data are useful for characterization.

Number of Locations

1 9 17 25 33

Abbreviations:
cVOC = Chlorinated volatile organic compound
DGI = Data Gaps Investigation
IM = Interim Measure
PCB = Polychlorinated biphenyl
RI = Remedial Investigation
SVOC = Semivolatile organic compound
TPH = Total petroleum hydrocarbons
VOC = Volatile organic compound

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Figure 3.5
Number of Soil Locations Sampled for Each Analyte Class, Summarized by Event

I:\GIS\Projects\COBothell-Ultra\AI\RIFS\Figure 3.5 Number of Soil Locations Sampled for Each Analyte Class, Summarized by Event.ai
03/19/2021

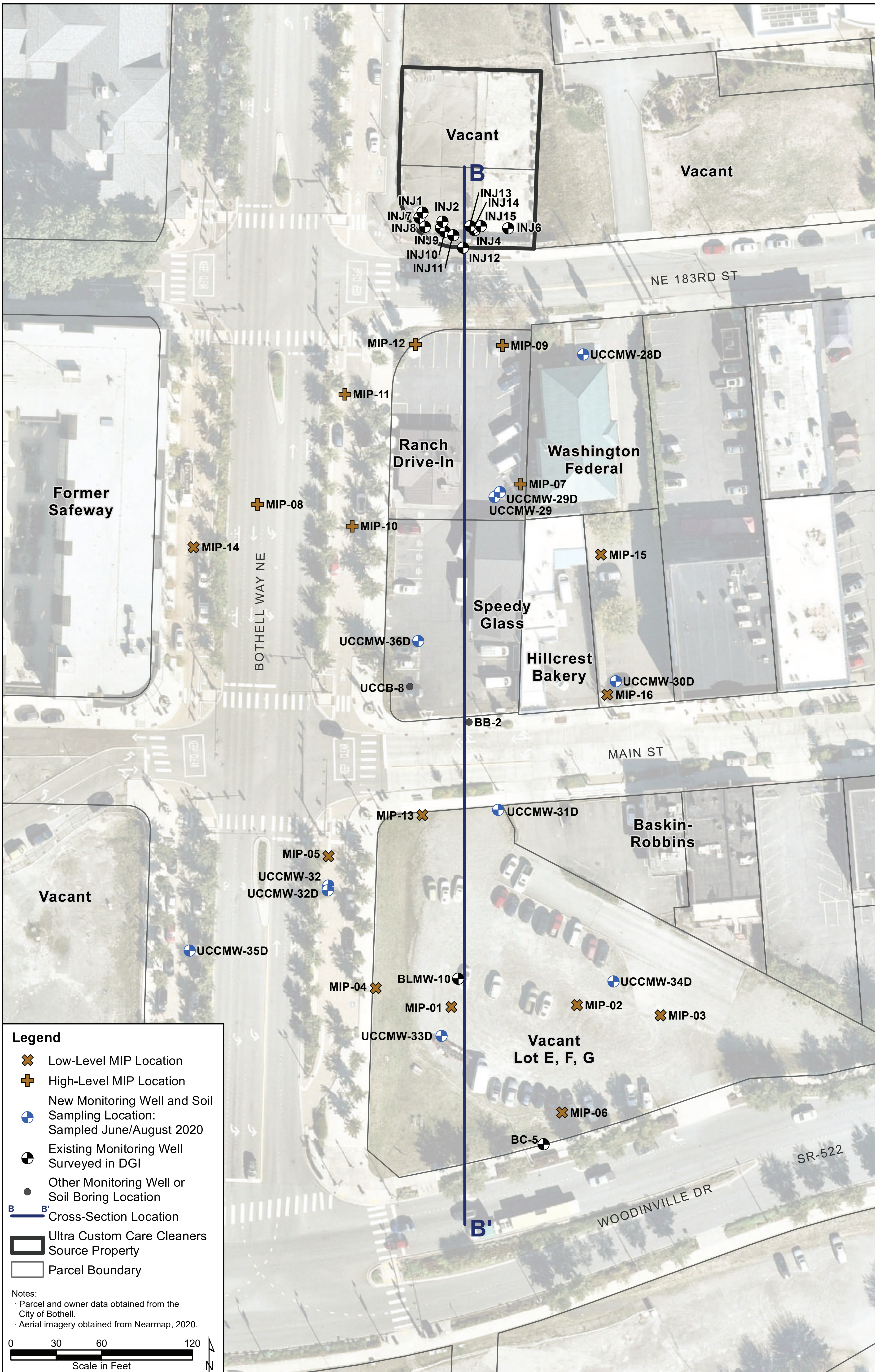

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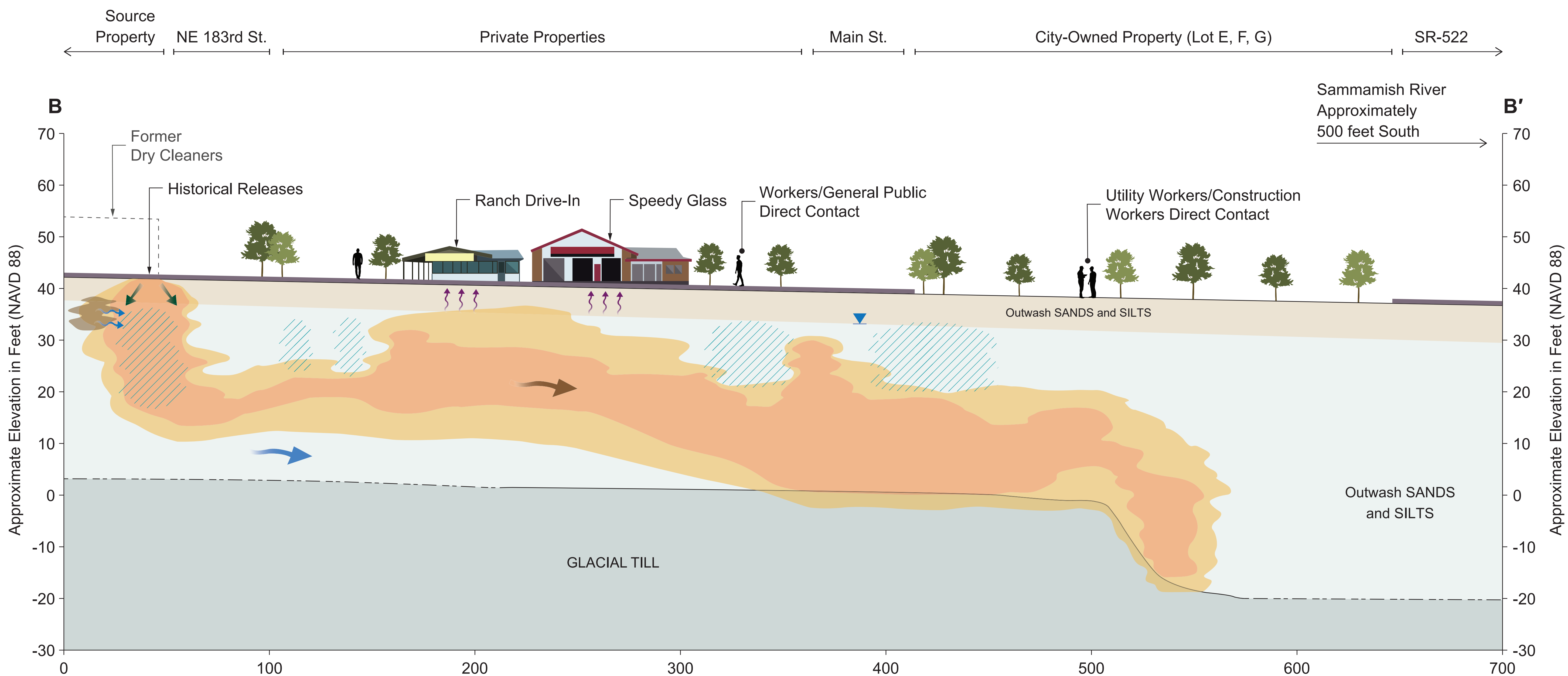
Figure 4.1
Location of Conceptual Site Model Cross-Section Line

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 4.1 Location of Conceptual Site Model Cross-Section Line.mxd
6/28/2021



Legend

- Pavement
- Contact Boundary Between Lithologies (dashed where inferred)
- Groundwater Level
- Groundwater Flow Direction (approximate)
- Plume Migration
- Downward Migration through Vadose Zone
- Injections
- Soil Contamination
- cVOCs in Groundwater (approximate) >2x CUL
- cVOCs in Groundwater (approximate) >1–2x CUL
- Leaching to Groundwater
- Vapor Intrusion

Abbreviations:
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
NAVD 88 = North American Vertical Datum of 1988

Horizontal Scale in Feet
0 50 100
0 20 40
Vertical Scale in Feet

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Figure 4.2
Conceptual Site Model along Cross-Section B-B′

I:\GIS\Projects\COBothell-Ultra\AI\RIFS\Figure 4.2 Conceptual Site Model along Cross-Section B-B'.ai
07/08/2021

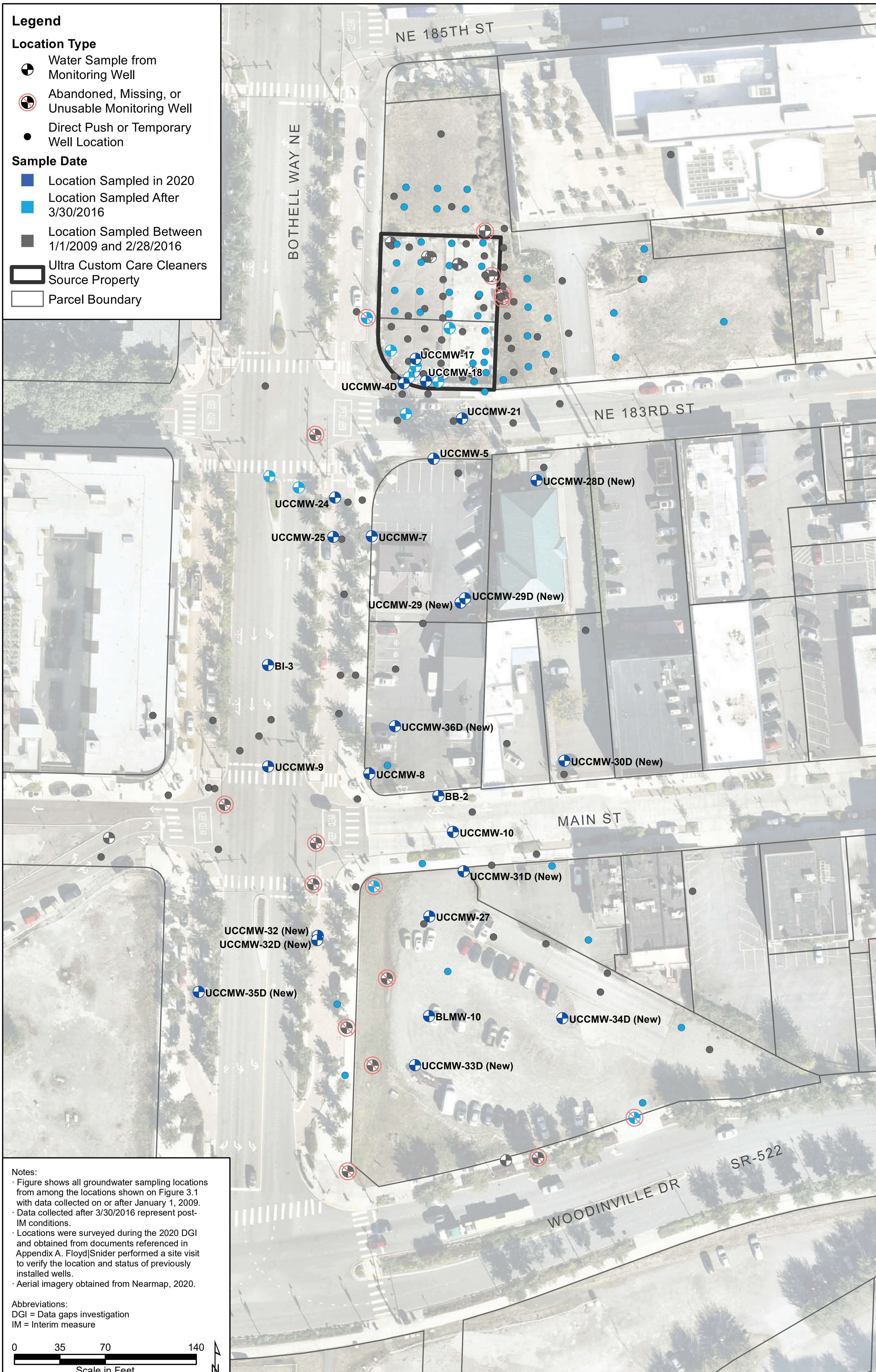

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Figure 5.1
Groundwater Locations Sampled on or after January 1, 2009

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 5.1 Groundwater Locations Sampled on or after January 1, 2009.mxd
6/28/2021

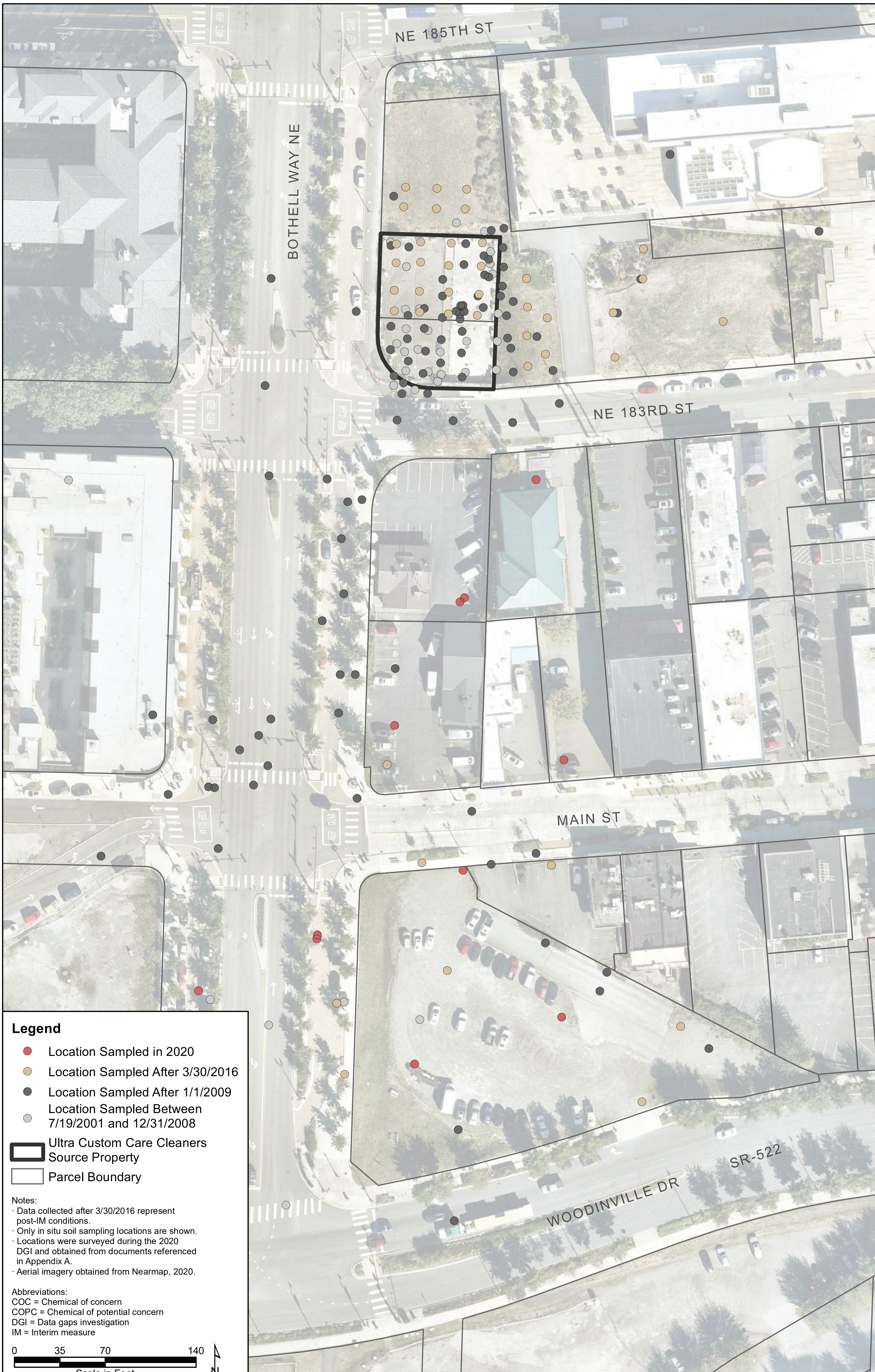

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Figure 5.2
Soil Sampling Data for Identification of COPCs and COCs

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 5.2 Soil Sampling Data for Identification of COPCs and COCs.mxd
6/28/2021

Collocated Shallow Aquifer Zone Groundwater Results and MIP Responses
MIP results with maximum response in shallow zone are labeled.

Collocated Deep Aquifer Zone Groundwater Results and MIP Responses
MIP results with maximum response in deep zone are labeled.

Legend

Groundwater Result Magnitude
- >2x CUL
- >1x CUL
- Meets CUL

MIP Response Magnitude
- Large Response
- Moderate Response
- Small Response
- Presumed Clean

Location Type
- ● Well
- + MIP Boring - High Level Probe
- ✕ MIP Boring - Low Level Probe

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

			Shallow	Deep
High Level Probe	MIP-07	UCCMW-29	Moderate Response >1x CUL	
		UCCMW-29D		Presumed Clean Meets CUL
	MIP-08	BI-3	Moderate Response >2x CUL	
	MIP-09	UCCMW-5	Small Response Meets CUL	
	MIP-11	UCCMW-24	Presumed Clean Meets CUL	
Low Level Probe	MIP-01	BLMW-10	Presumed Clean Meets CUL	
		UCCMW-33D		Small Response Meets CUL
	MIP-02	UCCMW-34D		Moderate Response >2x CUL
	MIP-05	UCCMW-32	Large Response >1x CUL	
		UCCMW-32D		Small Response Meets CUL
	MIP-13	UCCMW-27	Small Response Meets CUL	
	MIP-16	UCCMW-30D		Small Response Meets CUL

Chart summarizing collocated MIP responses and 2020 groundwater monitoring well results, by aquifer zone.

Notes:
1. Figure shows collocated MIP responses and cVOC groundwater data collected during the 2020 data gaps investigation.
2. The demarcation between shallow and deep aquifer zones is 25 feet below ground surface.

Abbreviations:
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
DCE = Dichloroethene
ft = Feet below ground surface
MIP = Membrane interface probe
PCE = Tetrachloroethene
TCE = Trichloroethene
VC = Vinyl chloride

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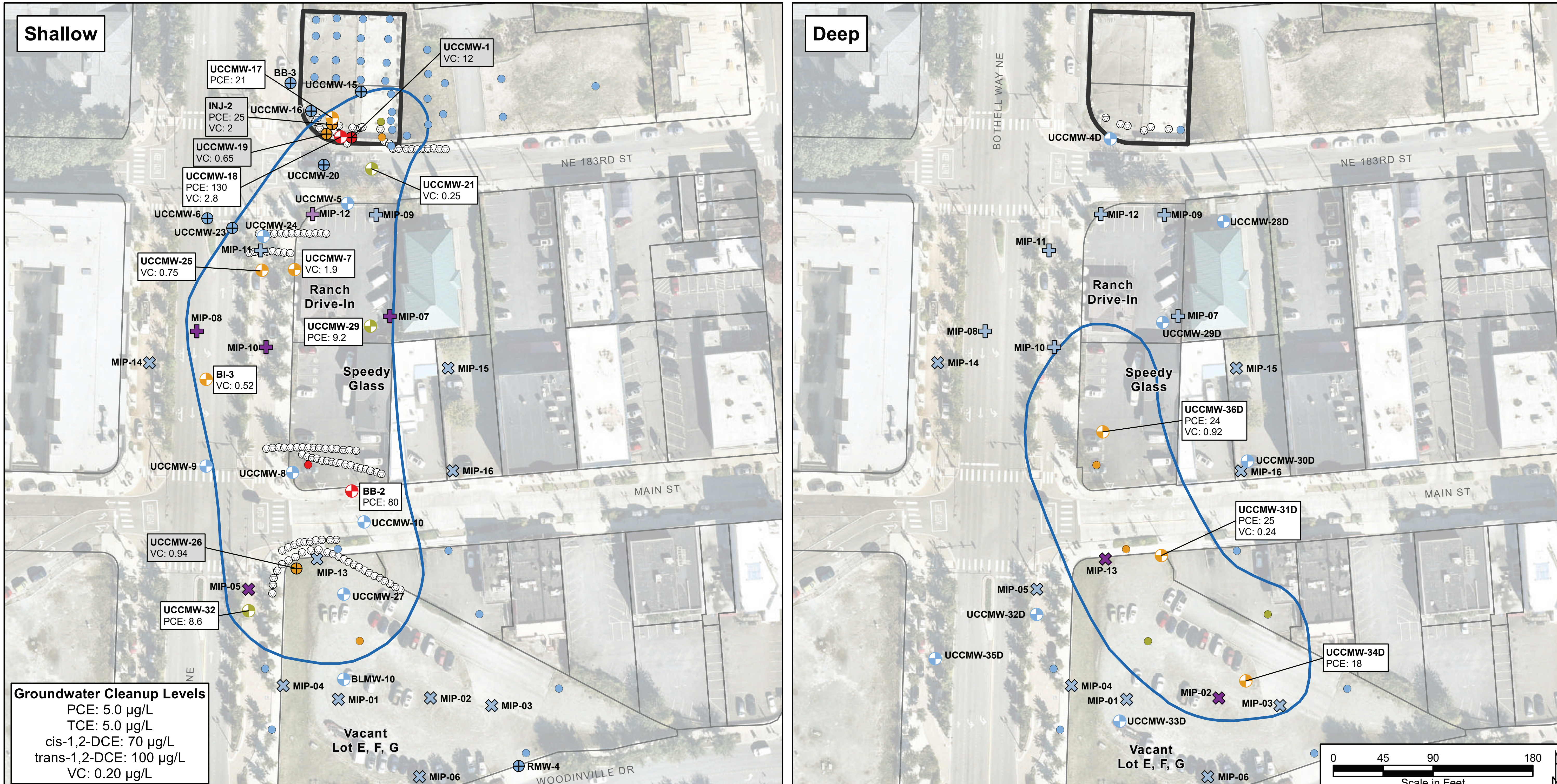
Figure 6.1
Collocated MIP and Well Data by Aquifer Zone

7/6/2021



Legend

Sample Locations
- Monitoring Well Analyzed in 2020
- Other Monitoring Well
- Direct Push Location

Exceedance Factor
- ≤CUL
- >1x–2x CUL
- >2x CUL
- >10x CUL

MIP Locations
- Low-Level
- High-Level

MIP Response
- Presumed Clean
- Small Response
- Moderate/Large Response

- IM Injection Location
- Groundwater cVOC Plume Boundary
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Notes:
- All results shown are the most recent concentrations and are in µg/L. Qualifiers are omitted.
- Shallow wells/borings are screened or completed between approximately 5–25 feet bgs and deep wells/borings are deeper than approximately 25 feet bgs.
- Location color is determined using the maximum exceedance factor of the most recent event. Results are compared to CULs developed in Table 5.7.
- Only results in the groundwater dataset defined in Table 5.8 are included. These groundwater data are presented in Table 6.1.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Gray shaded results boxes indicate samples collected prior to 2020.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
- bgs = Below ground surface
- CUL = Cleanup level
- cVOC = Chlorinated volatile organic compound
- DCE = Dichloroethene
- IM = Interim measure
- µg/L = Micrograms per liter
- MIP = Membrane interface probe
- PCE = Tetrachloroethene
- TCE = Trichloroethene
- VC = Vinyl chloride

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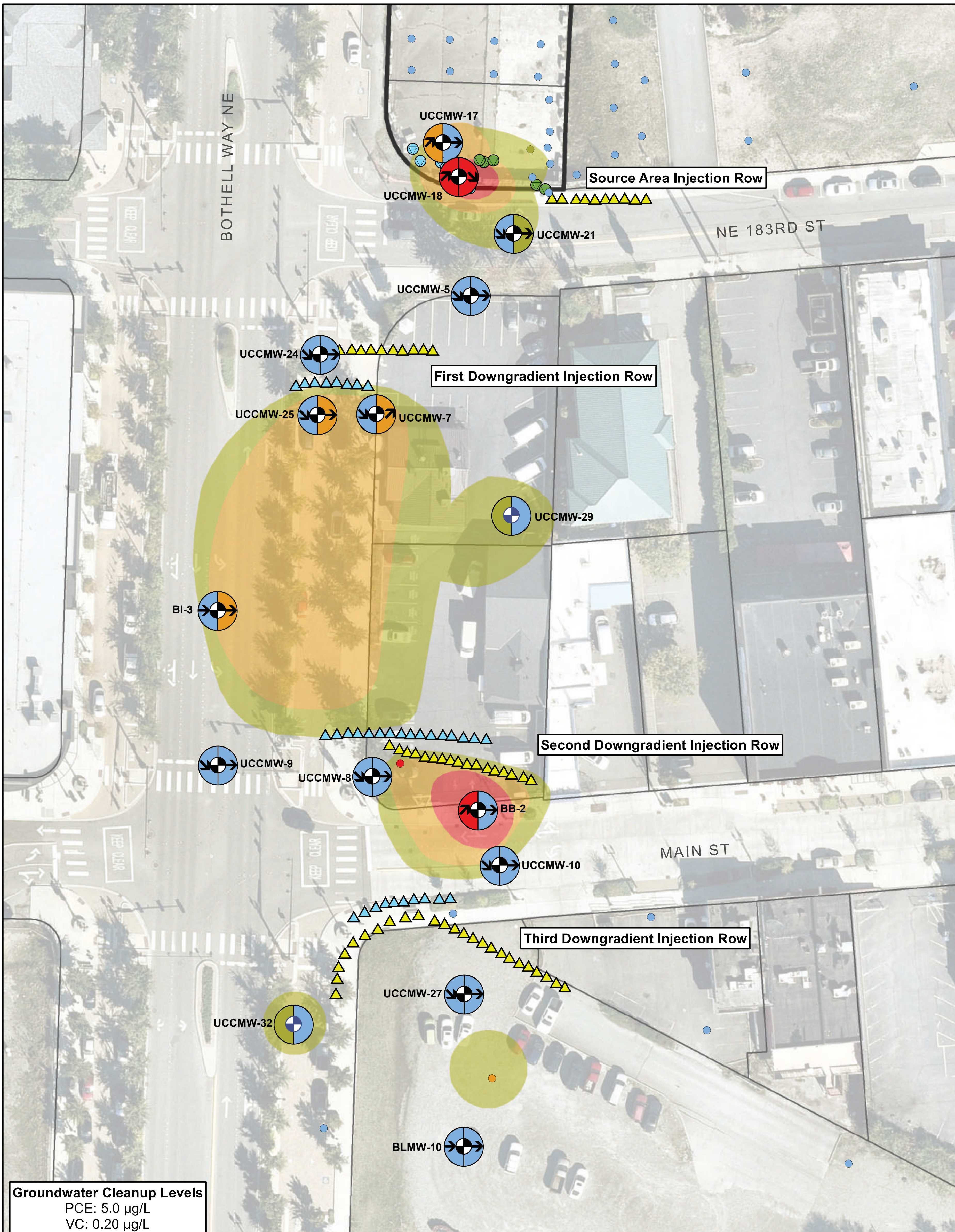
Figure 6.2
Recent Groundwater cVOC Data Compared to CULs

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.2 Recent Groundwater cVOC Data Compared to CULs.mxd
6/28/2021



Legend

Groundwater Sampling Locations
- Monitoring Well Installed Prior to 2020
- Monitoring Well Installed in 2020
- Direct Push Location

Exceedance Factor
- ≤CUL
- >1x CUL
- >2x CUL
- >10x CUL

PCE/VC Plume
- >1x CUL
- >2x CUL
- >10x CUL

Symbol Key

PCE Trend and Exceedance Factor | VC Trend and Exceedance Factor | UCCMW-9

Bioinjection Locations
- Bioinjection Well
- Direct Push Bioinjection

Bioinjection Event
- January 2015
- January 2015 and April 2016
- April 2016
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Notes:
- Shallow wells/borings are screened or completed between approximately 5–25 feet bgs.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Refer to Section 6.1.1.1 for description of PCE/VC plume extent.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
µg/L = Micrograms per liter
PCE = Tetrachloroethene
VC = Vinyl chloride

0 25 50 100
Scale in Feet
N

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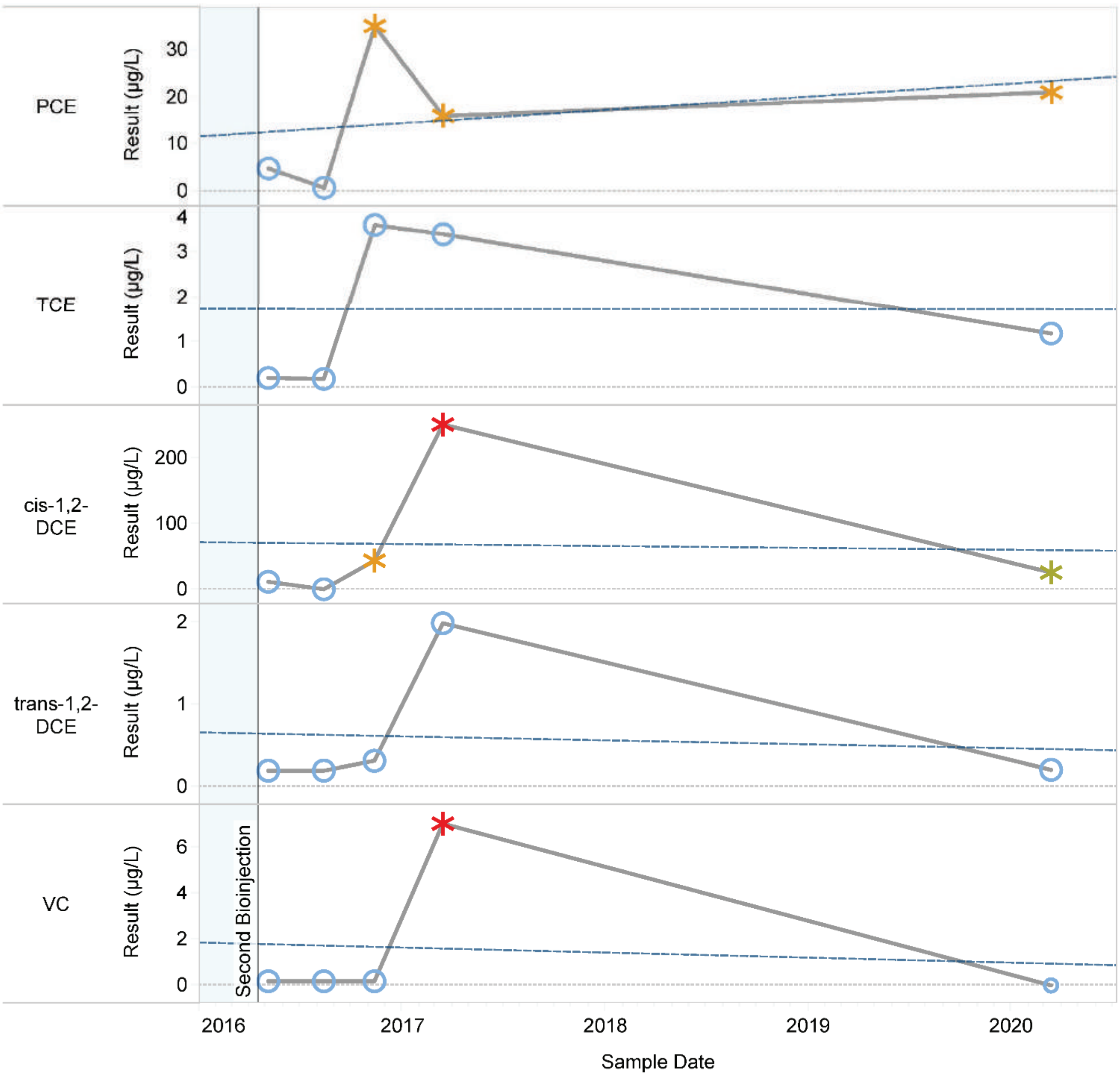
Figure 6.3
Shallow Aquifer Zone PCE and VC Groundwater Compliance and Trends

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.3 Shallow Aquifer Zone PCE and VC Groundwater Compliance and Trends.mxd
6/28/2021



Legend

Compliance Information

Result Shape
- ✱ Exceeds CUL
- O Meets CUL

Result Size
- Nondetect Result
- Detected Result

Notes:
1. Results are compared to CULs developed in Table 5.7.
2. Trendlines are calculated using recent (post-bioinjection) data. Results are presented in Table 6.1.

Exceedance Factor
- >10x CUL
- >2x CUL
- >1x CUL
- Meets CUL

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

Abbreviations:
CUL = Cleanup level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
µg/L = Micrograms per liter
VC = Vinyl chloride

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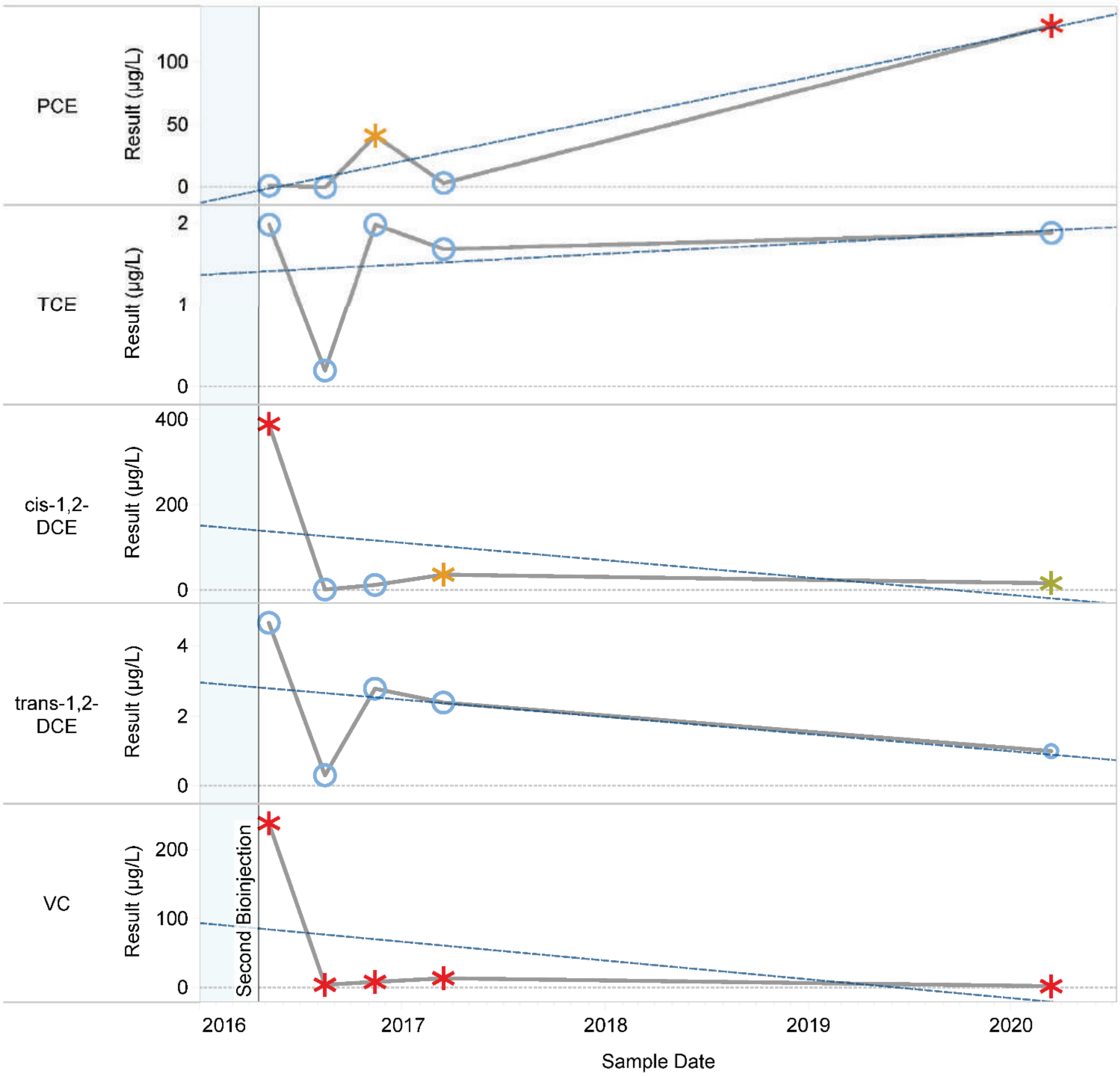
Figure 6.4a
cVOC Time Series Chart for UCCMW-17



Legend

Compliance Information

Result Shape
- ✱ Exceeds CUL
- O Meets CUL

Result Size
- Nondetect Result
- Detected Result

Exceedance Factor
- >10x CUL
- >2x CUL
- >1x CUL
- Meets CUL

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

Notes:
1. Results are compared to CULs developed in Table 5.7.
2. Trendlines are calculated using recent (post-bioinjection) data. Results are presented in Table 6.1.

Abbreviations:
CUL = Cleanup level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
µg/L = Micrograms per liter
VC = Vinyl chloride

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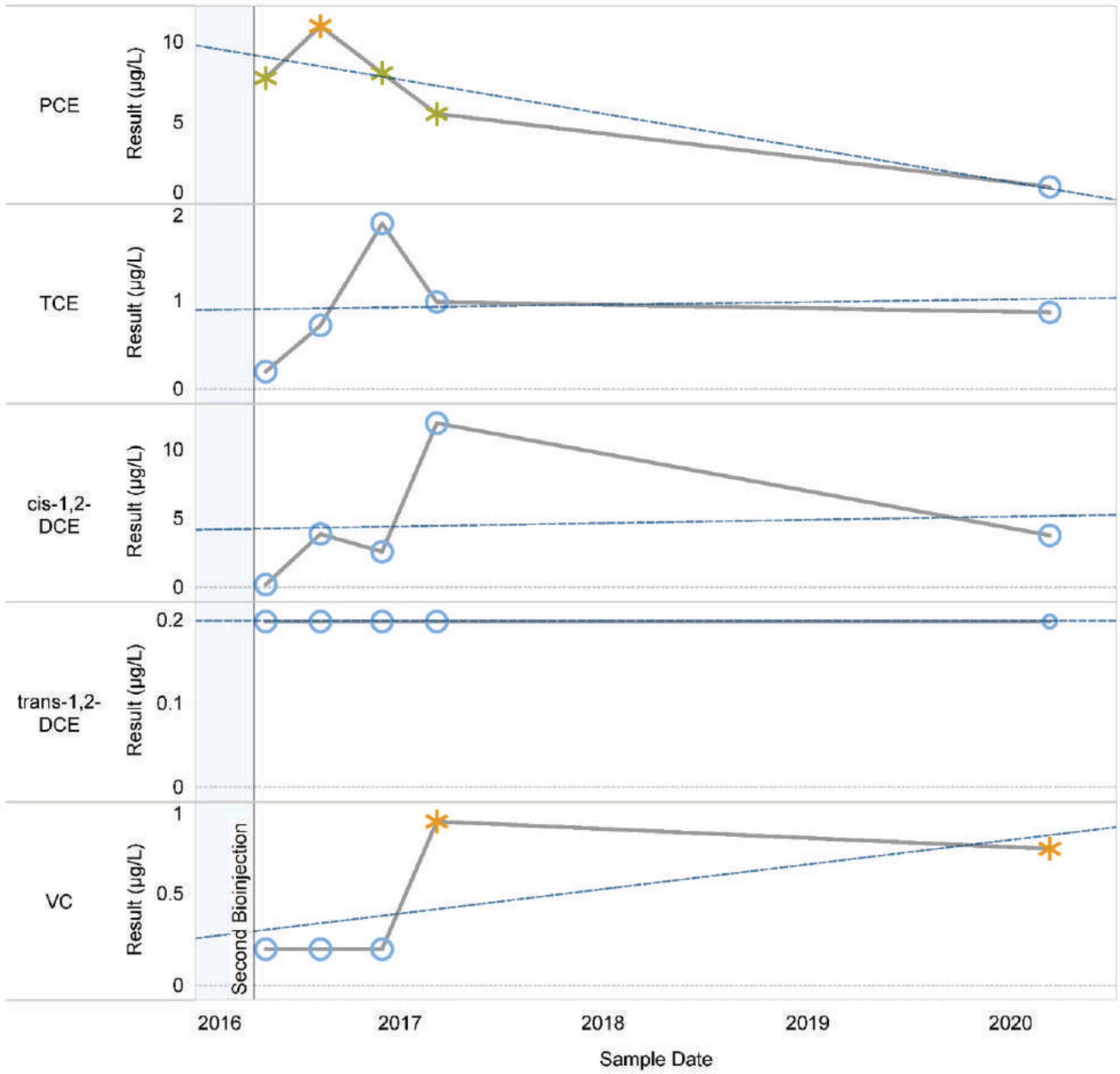
Figure 6.4b
cVOC Time Series Chart for UCCMW-18



Legend

Compliance Information

Result Shape
- ✱ Exceeds CUL
- O Meets CUL

Result Size
- Nondetect Result
- Detected Result

Exceedance Factor
- >2x CUL
- >1x CUL
- Meets CUL

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

Notes:
1. Results are compared to CULs developed in Table 5.7.
2. Trendlines are calculated using recent (post-bioinjection) data. Results are presented in Table 6.1.

Abbreviations:
CUL = Cleanup level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
µg/L = Micrograms per liter
VC = Vinyl chloride

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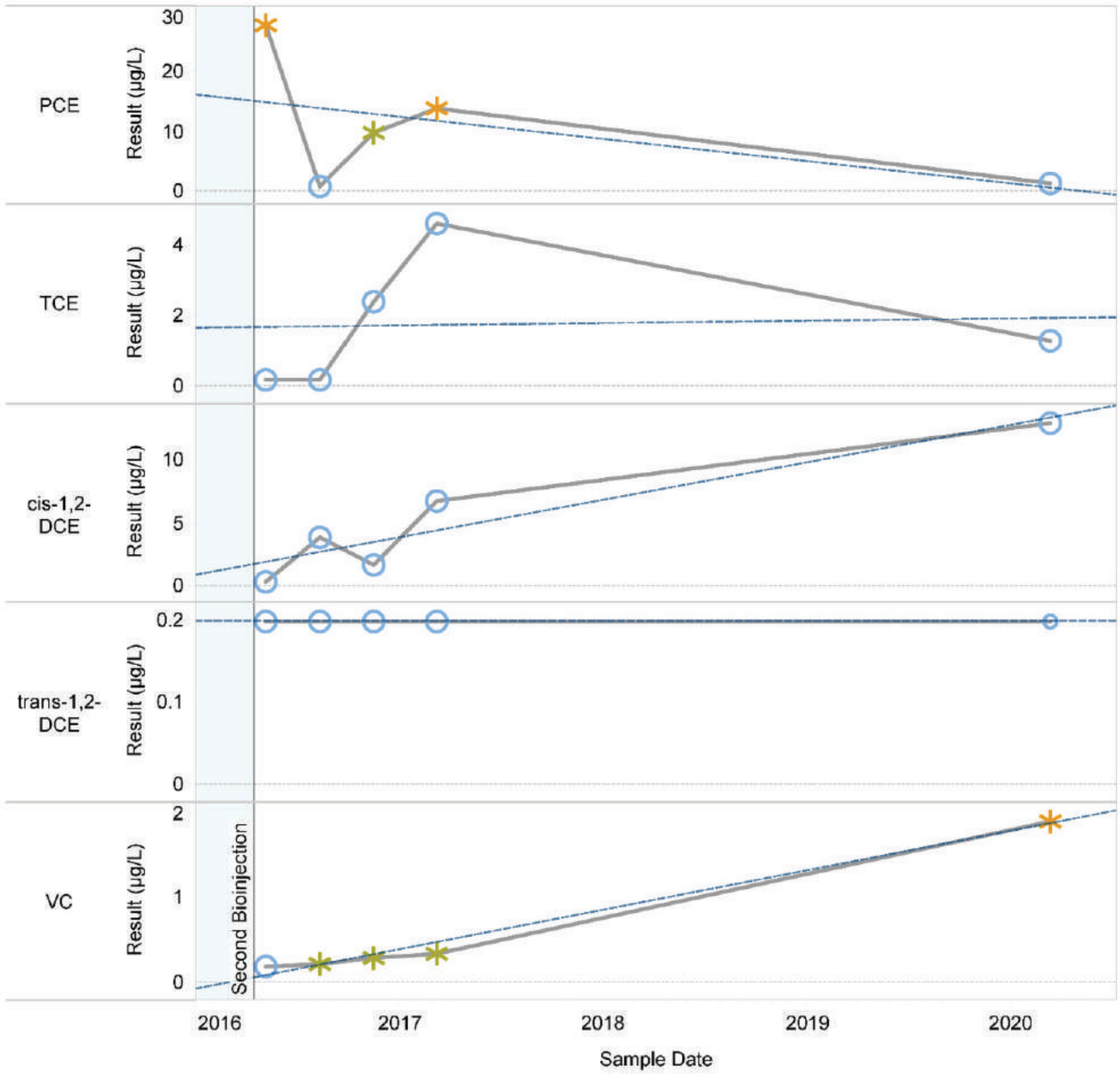
Figure 6.4c
cVOC Time Series Chart for UCCMW-25



Legend

Compliance Information

Result Shape
- ✱ Exceeds CUL
- O Meets CUL

Result Size
- Nondetect Result
- Detected Result

Exceedance Factor
- >2x CUL
- >1x CUL
- Meets CUL

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

Notes:
1. Results are compared to CULs developed in Table 5.7.
2. Trendlines are calculated using recent (post-bioinjection) data. Results are presented in Table 6.1.

Abbreviations:
CUL = Cleanup level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
µg/L = Micrograms per liter
VC = Vinyl chloride

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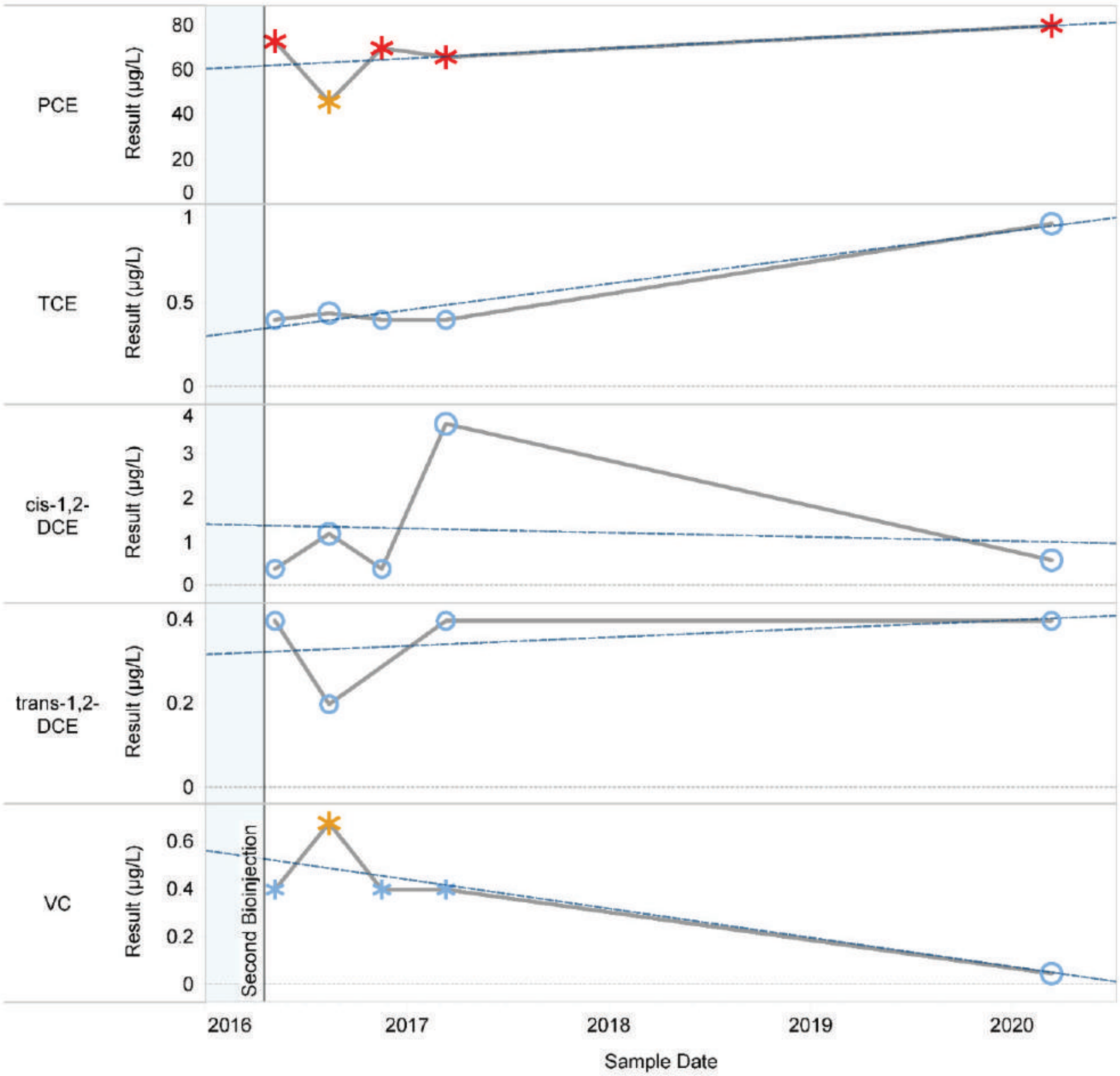
Figure 6.4d
cVOC Time Series Chart for UCCMW-7



Legend

Compliance Information

Result Shape
- ✱ Exceeds CUL
- O Meets CUL

Result Size
- Nondetect Result
- Detected Result

Notes:
1. Results are compared to CULs developed in Table 5.7.
2. Trendlines are calculated using recent (post-bioinjection) data. Results are presented in Table 6.1.

Exceedance Factor
- >10x CUL
- >2x CUL
- >1x CUL
- Meets CUL

Groundwater Cleanup Levels
PCE: 5.0 µg/L
TCE: 5.0 µg/L
cis-1,2-DCE: 70 µg/L
trans-1,2-DCE: 100 µg/L
VC: 0.20 µg/L

Abbreviations:
CUL = Cleanup level
DCE = Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
µg/L = Micrograms per liter
VC = Vinyl chloride

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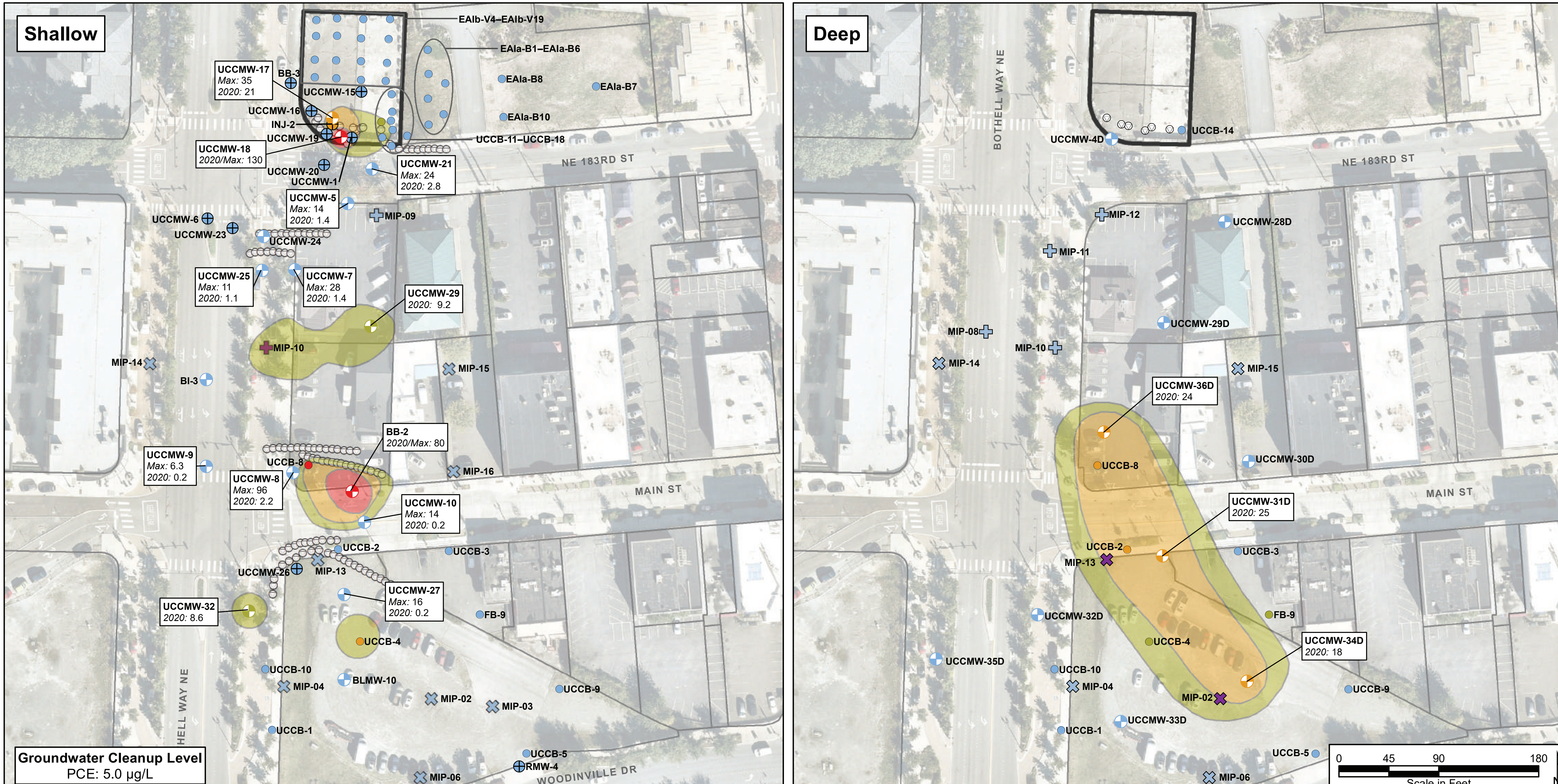
Figure 6.4e
cVOC Time Series Chart for BB-2



Legend

Sample Location
- Monitoring Well Analyzed in 2020
- Other Monitoring Well
- Direct Push Location

Exceedance Factor
- ≤CUL
- >1x CUL
- >2x CUL
- >10x CUL

PCE Plumes
- >1x CUL
- >2x CUL
- >10x CUL

MIP Locations
- Low-Level
- High-Level

MIP Response
- Presumed Clean
- Small Response
- Moderate/Large Response

- IM Injection Location
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Notes:
- All results shown are the most recent concentrations and are in µg/L. Qualifiers are omitted.
- Shallow wells/borings are screened or completed between approximately 5–25 feet bgs and deep wells/borings are deeper than approximately 25 feet bgs.
- Location color is determined using the exceedance factor of the most recent result. Results are compared to CULs developed in Table 5.7. Labels show current and maximum result for any well sampled in 2020 with a result that exceeds the PCE CUL.
- Only results in the groundwater dataset defined in Table 5.8 are included. These data are presented in Table 6.1.
- MIP locations whose data are replaced by well data are not shown.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
DGI = Data gaps investigation
IM = Interim measure
µg/L = Micrograms per liter
MIP = Membrane interface probe
PCE = Tetrachloroethene

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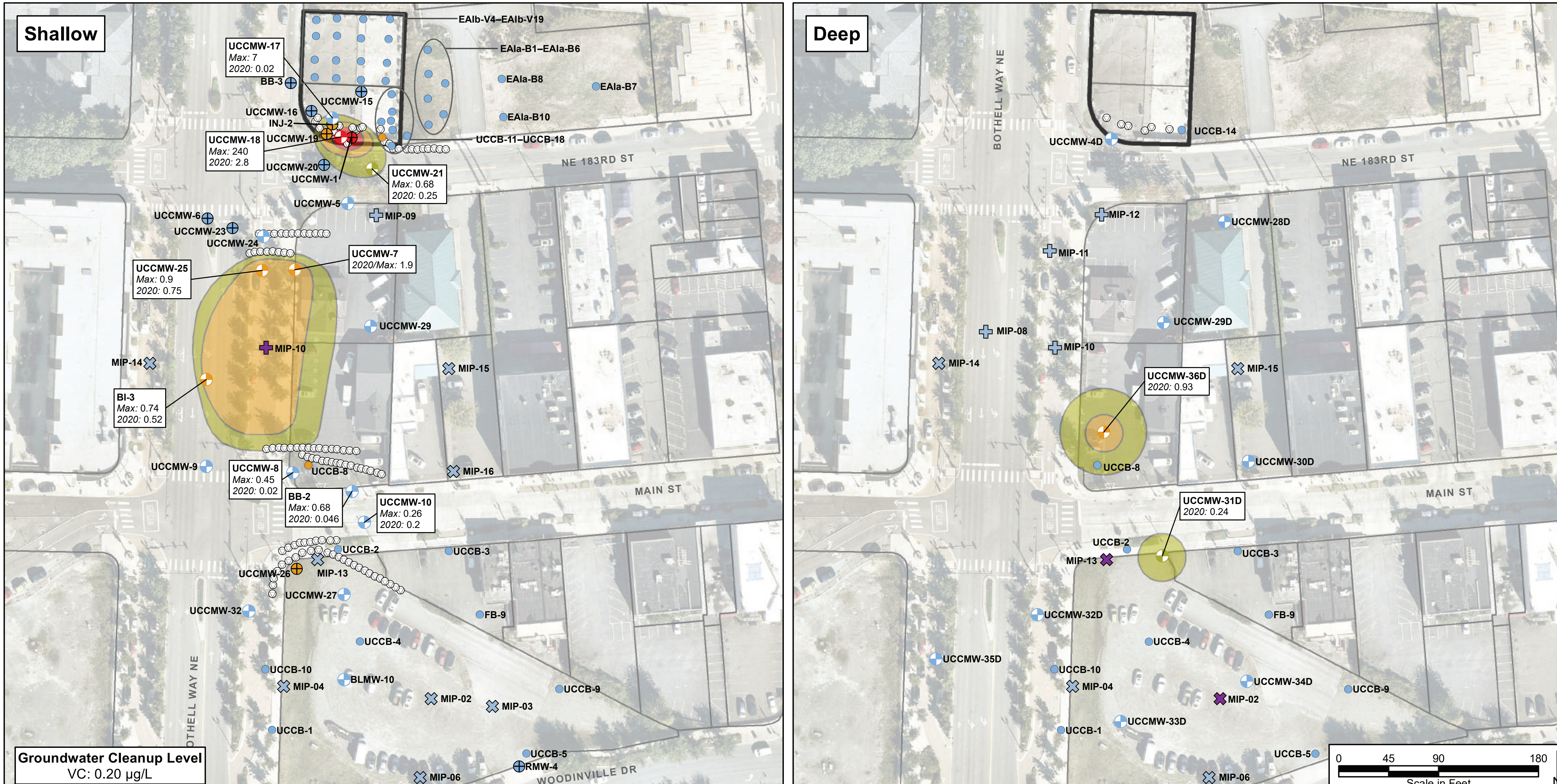
Figure 6.5
Recent Groundwater PCE Data, Plume Areas, and Changes in Concentration

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.5 Recent Groundwater PCE Data, Isocontours, and Changes in Concentation.mxd
7/8/2021



Legend

Sample Location
- Monitoring Well Analyzed in 2020
- Other Monitoring Well
- Direct Push Location

Exceedance Factor
- ≤CUL
- >1x CUL
- >2x CUL
- >10x CUL

VC Plumes
- >1x CUL
- >2x CUL
- >10x CUL

MIP Locations
- Low-Level
- High-Level

MIP Response
- Presumed Clean
- Small Response
- Moderate/Large Response

- IM Injection Location
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Notes:
- All results shown are the most recent concentrations and are in µg/L. Qualifiers are omitted.
- Shallow wells/borings are screened or completed between approximately 5–25 feet bgs and deep wells/borings are deeper than approximately 25 feet bgs.
- Location color is determined using the exceedance factor of the most recent result. Results are compared to CULs developed in Table 5.7. Labels show current and maximum result for any well sampled in 2020 with a result that exceeds the VC CUL.
- Only results in the groundwater dataset defined in Table 5.8 are included. These data are presented in Table 6.1.
- MIP locations whose data are replaced by well data are not shown.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
DGI = Data gaps investigation
IM = Interim measure
µg/L = Micrograms per liter
MIP = Membrane interface probe
VC = Vinyl chloride

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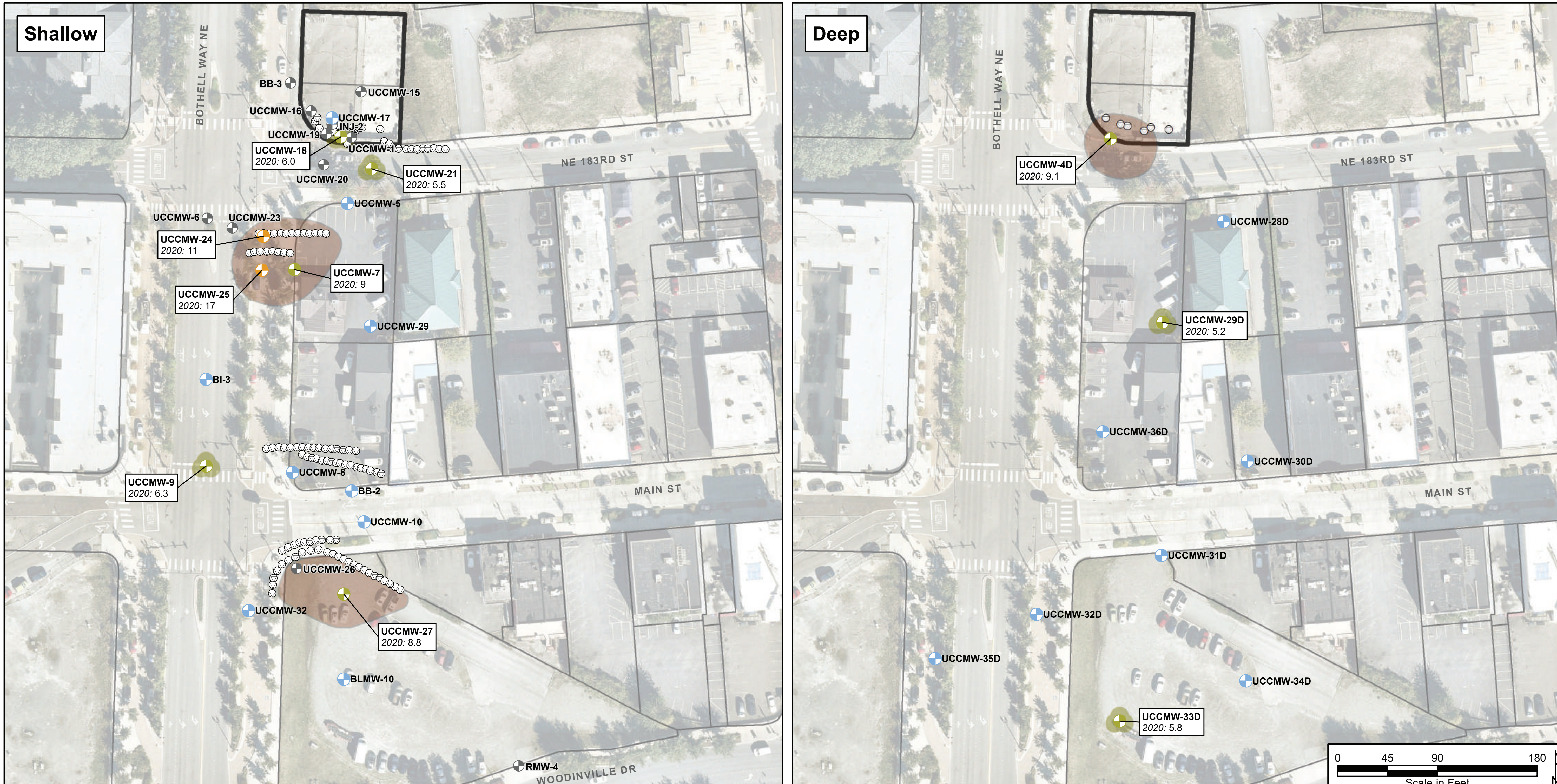
Figure 6.6
Recent Groundwater VC Data, Plume Areas, and Changes in Concentration

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.6 Recent Groundwater VC Data, Plume Areas, and Changes in Concentration.mxd
6/28/2021



Legend

Sample Location

- Monitoring Well Analyzed for Arsenic in 2020
- Monitoring Well Not Analyzed for Arsenic

Exceedance Factor

- ≤CUL
- >1x CUL
- >2x CUL
- >10x CUL

- Arsenic Contamination (Elevated Relative to Natural Background)
- Arsenic Concentration (Within Range of Natural Background)
- IM Injection Location
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Groundwater Cleanup Level
Arsenic: 5 µg/L

Notes:
- All results shown are the most recent concentrations and are in µg/L. Qualifiers are omitted.
- Shallow wells/borings are screened or completed between approximately 5–25 feet bgs and deep wells/borings are deeper than approximately 25 feet bgs.
- Location color is determined using the exceedance factor of the most recent result. Results are compared to CULs developed in Table 5.7.
- Only results in the groundwater dataset defined in Table 5.8 are included. These data are presented in Table 6.1.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
DGI = Data gaps investigation
IM = Interim measure
µg/L = Micrograms per liter

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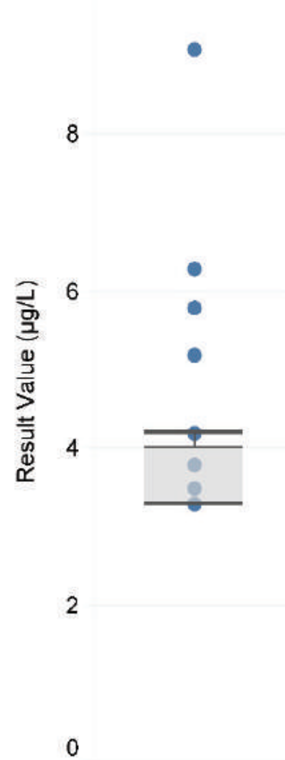
Figure 6.7
Recent Arsenic in Groundwater Compared to CULs

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.7 Recent Arsenic in Groundwater Compared to CULs.mxd
6/28/2021

Box and Whiskers Plot



Background Dataset Summary Statistics

	Number of Results	90th Percentile	50th Percentile
Arsenic	19	5.9	3.3

Legend

Notes:

1. Total arsenic groundwater data collected from the monitoring wells shown on the inset figure were included in the arsenic background dataset. These locations were selected because they are outside the boundary of the cVOC plume in accordance with WAC 173-340-709(2). Accordingly, at location UCCMW-4D only recent data collected and analyzed in 2020 were considered.
2. For data following a lognormal distribution, background is calculated as the minimum between the upper 90th percentile and four times the 50th percentile, per WAC 173-340-709(3)(c).

Abbreviations:

cVOC = Chlorinated volatile organic compound
WAC = Washington Administrative Code

Histogram Showing Lognormal Distribution of Background Dataset

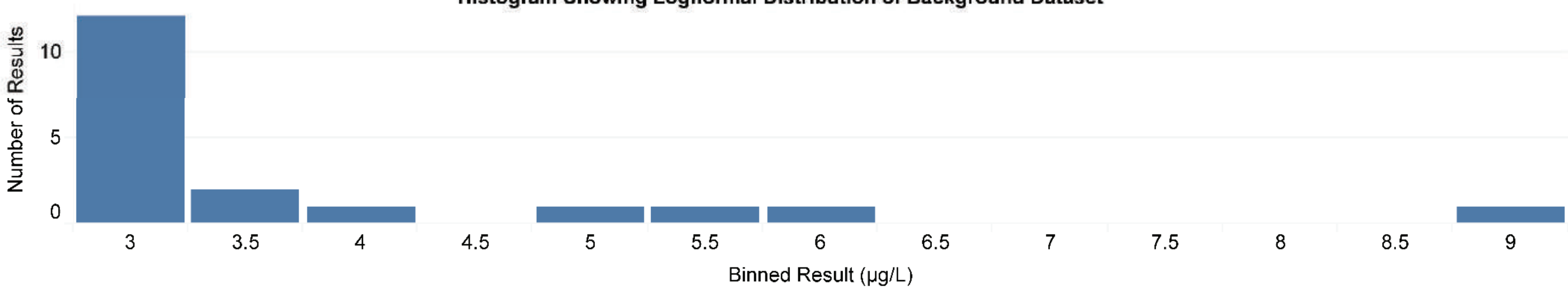


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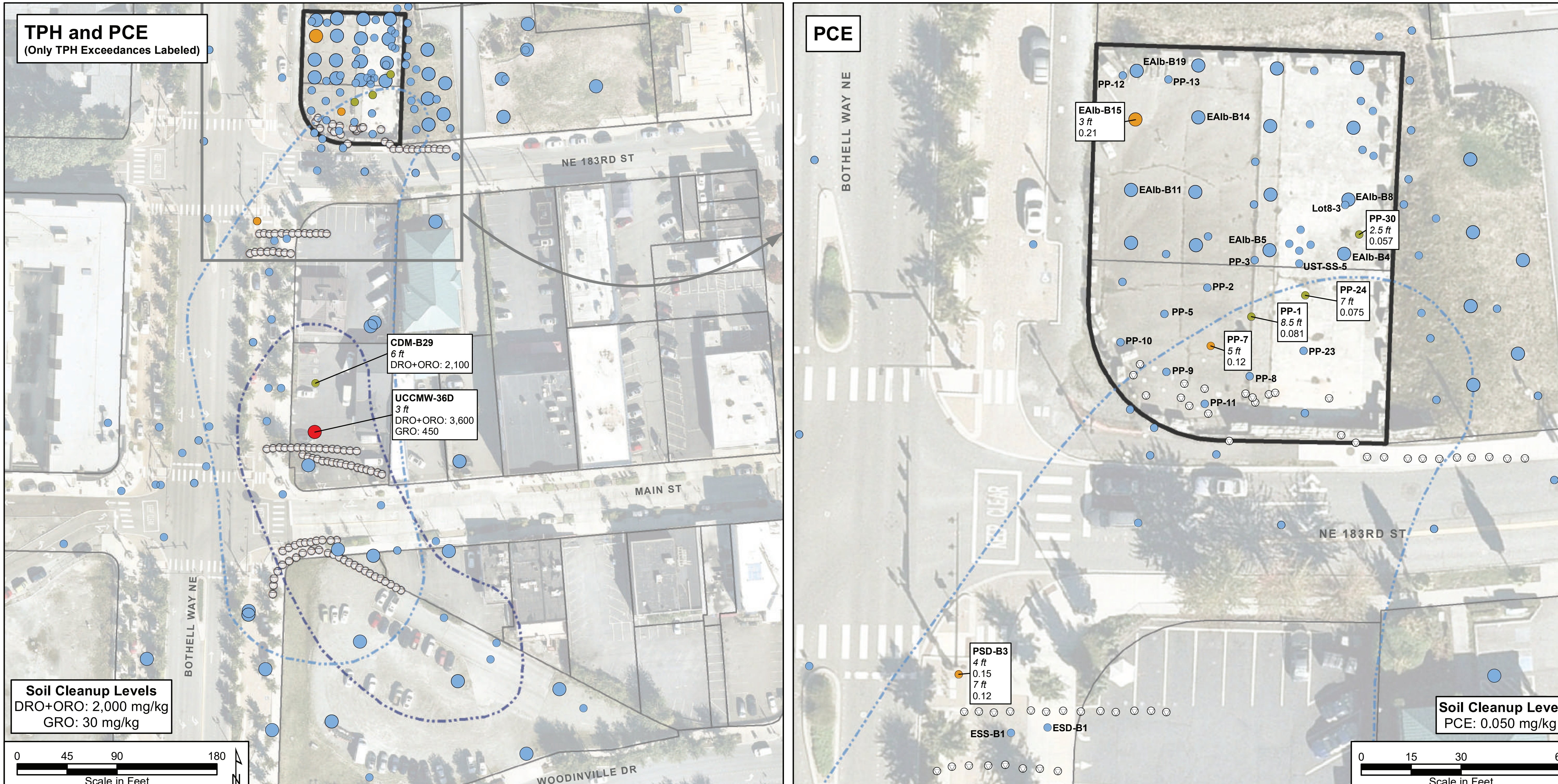
Figure 6.8
Groundwater Dataset Used to Determine Natural Background for Arsenic

4/7/2021



Legend

- Direct Push or SubSlab Location Sampled Before 3/30/16
- Direct Push or SubSlab Location Sampled After 3/30/16

Exceedance Factor

- ≤CUL
- >1x CUL
- >2x CUL
- >10x CUL

- IM Injection Location
- Deep Groundwater Plume
- Shallow Groundwater Plume
- Ultra Custom Care Cleaners Source Property
- Parcel Boundary

Label Key

Location Name — PP-7
Depth — 5 ft
Result (mg/kg) — 0.12

Notes:
- All results are in mg/kg. Qualifiers are omitted.
- Location color is determined using the maximum exceedance factor for any detected PCE or TPH result. Results are compared to CULs developed in Table 5.11.
- This figure shows in situ soil data from locations sampled on or after January 1, 2009, from among the locations shown on Figure 5.2. Soil data are presented in Table 6.3.
- Well locations were surveyed by Floyd|Snider in 2020; other locations were obtained from documents referenced in Appendix A.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
CUL = Cleanup level
DRO = Diesel-range organics
ft = Feet
GRO = Gasoline-range organics
IM = Interim measure
mg/kg = Milligrams per kilogram
ORO = Oil-range organics
PCE = Tetrachloroethene
TPH = Total petroleum hydrocarbons

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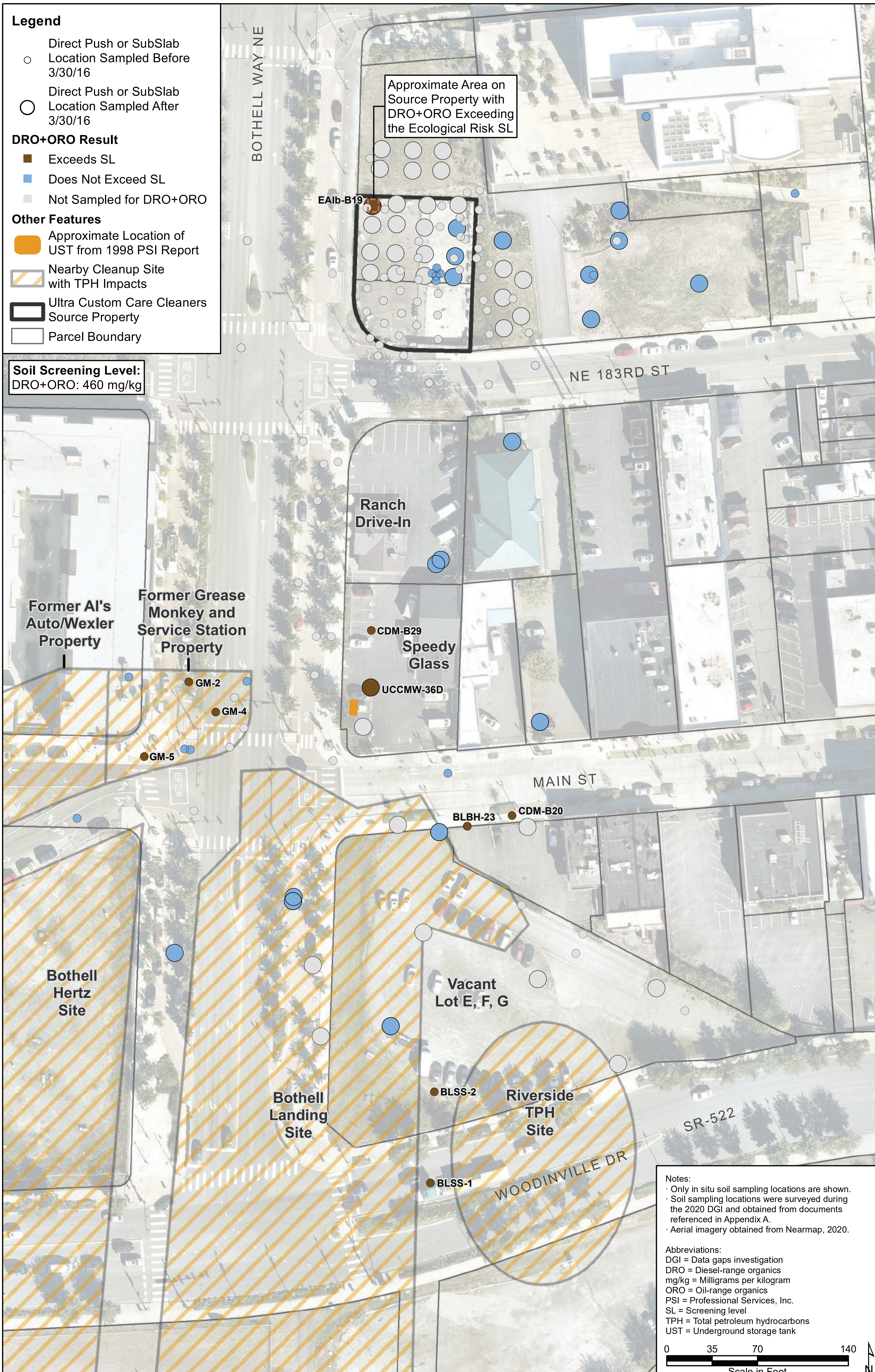
Figure 6.9
Soil Data for TPH and PCE Compared to CULs



Notes:
· Only in situ soil sampling locations are shown.
· Soil sampling locations were surveyed during the 2020 DGI and obtained from documents referenced in Appendix A.
· Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
DGI = Data gaps investigation
DRO = Diesel-range organics
mg/kg = Milligrams per kilogram
ORO = Oil-range organics
PSI = Professional Services, Inc.
SL = Screening level
TPH = Total petroleum hydrocarbons
UST = Underground storage tank

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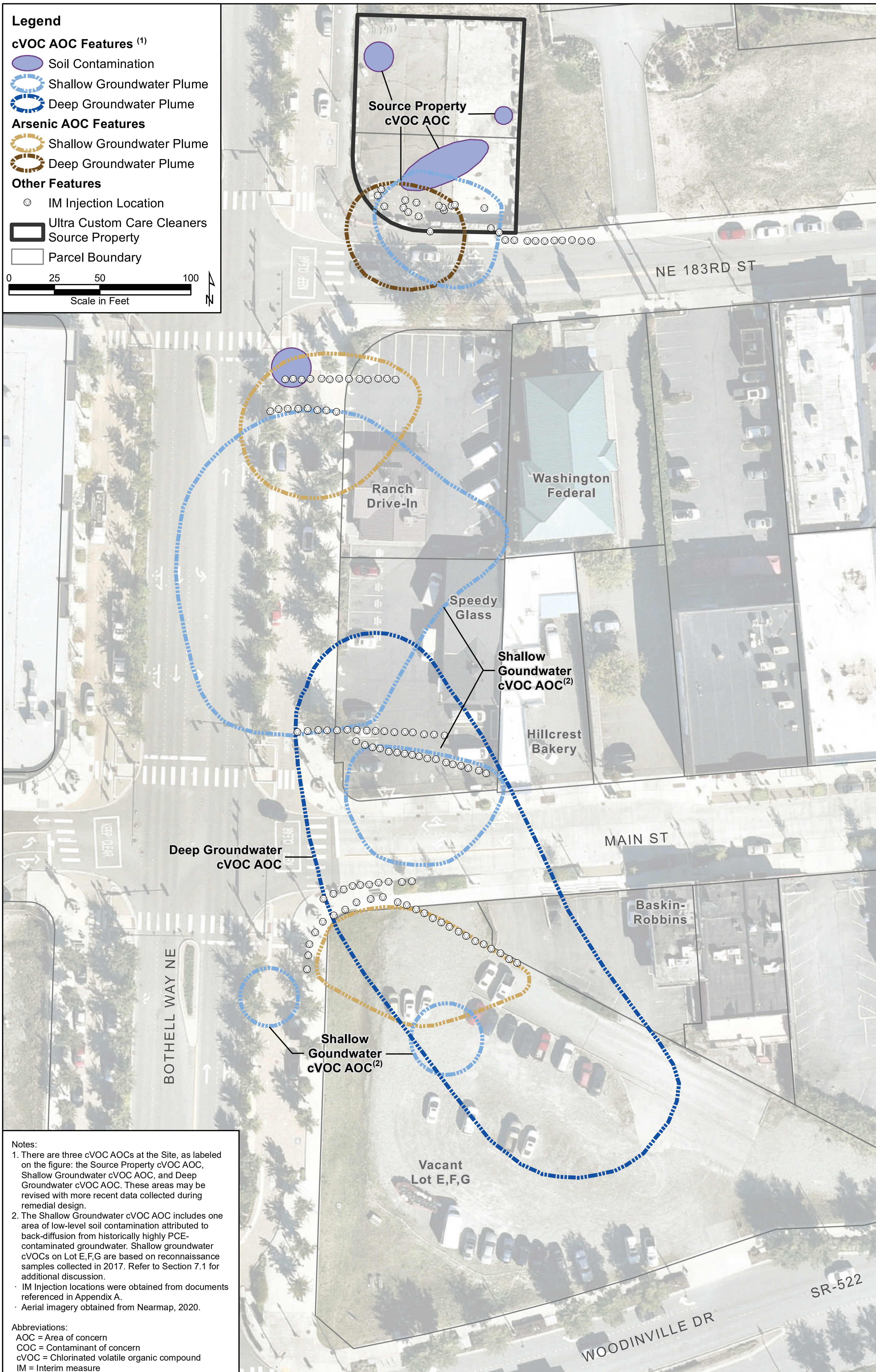
Figure 6.10
Soil Data for DRO+ORO Compared to Ecological Risk SLs

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 6.10 Soil Data for DRO+ORO Compared to Ecological Risk SLs.mxd
6/28/2021



Notes:
1. There are three cVOC AOCs at the Site, as labeled on the figure: the Source Property cVOC AOC, Shallow Groundwater cVOC AOC, and Deep Groundwater cVOC AOC. These areas may be revised with more recent data collected during remedial design.
2. The Shallow Groundwater cVOC AOC includes one area of low-level soil contamination attributed to back-diffusion from historically highly PCE-contaminated groundwater. Shallow groundwater cVOCs on Lot E,F,G are based on reconnaissance samples collected in 2017. Refer to Section 7.1 for additional discussion.
- IM Injection locations were obtained from documents referenced in Appendix A.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
AOC = Area of concern
COC = Contaminant of concern
cVOC = Chlorinated volatile organic compound
IM = Interim measure

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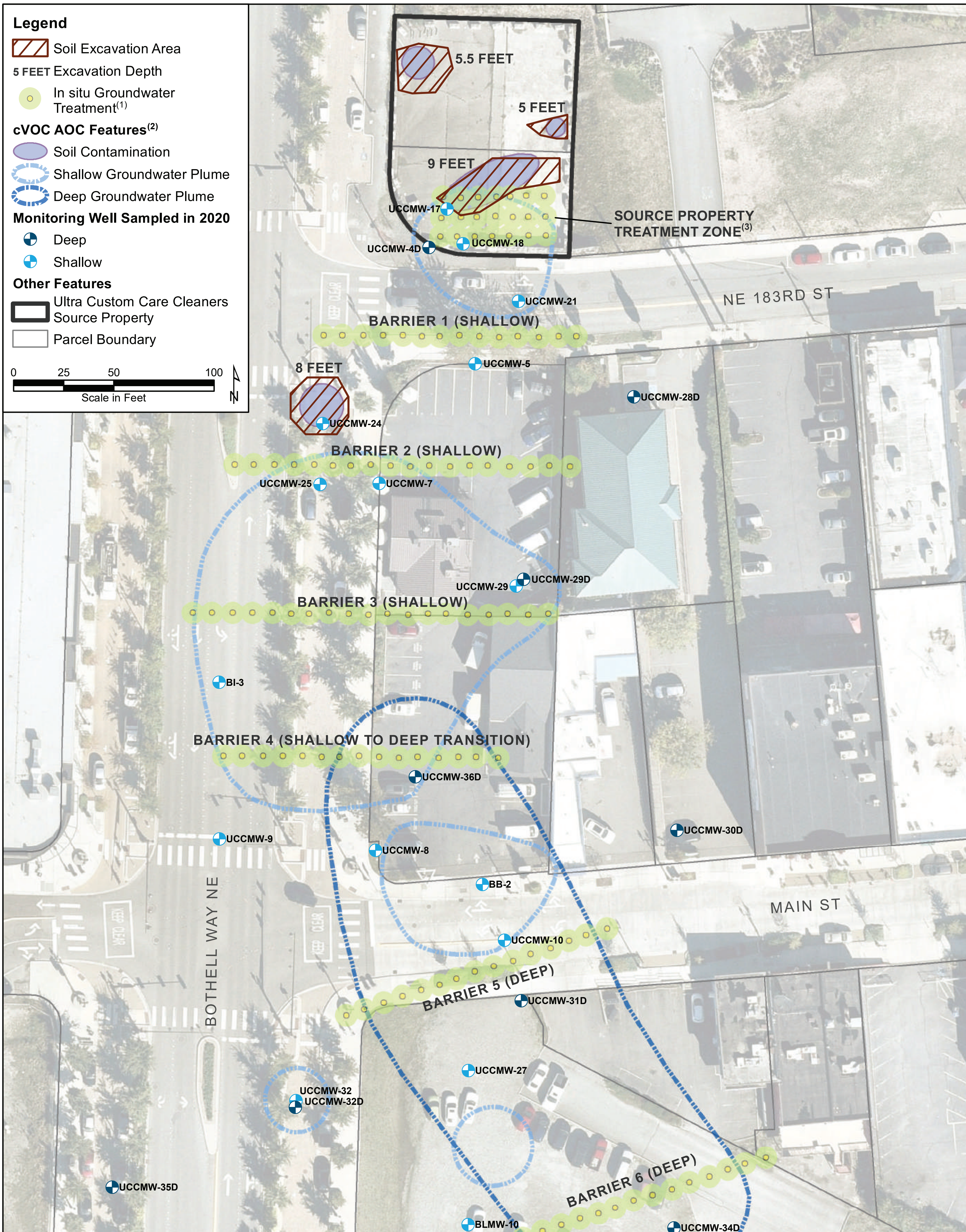
Figure 7.1
Summary of Areas of Concern and COCs

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 7.1 Summary of Areas of Concern and COCs.mxd
7/27/2021



Notes:
1. In situ groundwater treatment of the PCE and vinyl chloride groundwater plume will include injection of a trademarked colloidal liquid carbon biomatrix and sulfidated micro zero-valent iron mixture (PlumeStop and S-MVZI) to create passive treatment barriers for chemical reduction and bioremediation in both shallow and deep groundwater.
2. There are three cVOC AOCs at the Site, the Source Property cVOC AOC, Shallow Groundwater cVOC AOC, and Deep Groundwater cVOC AOC (refer to Figure 7.1 for detail).
3. Source property treatment consists of PlumeStop and S-MVZI injections throughout the treatment area.

· The cVOC plume extents shown encompass the extent of groundwater contamination that is greater than the Proposed CULs.
· Shallow wells are screened or completed between approximately 5–25 feet bgs and deep wells are deeper than approximately 25 feet bgs.
· Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
PCE = Trichloroethene
S-MZVI = Sulfidated micro zero-valent iron

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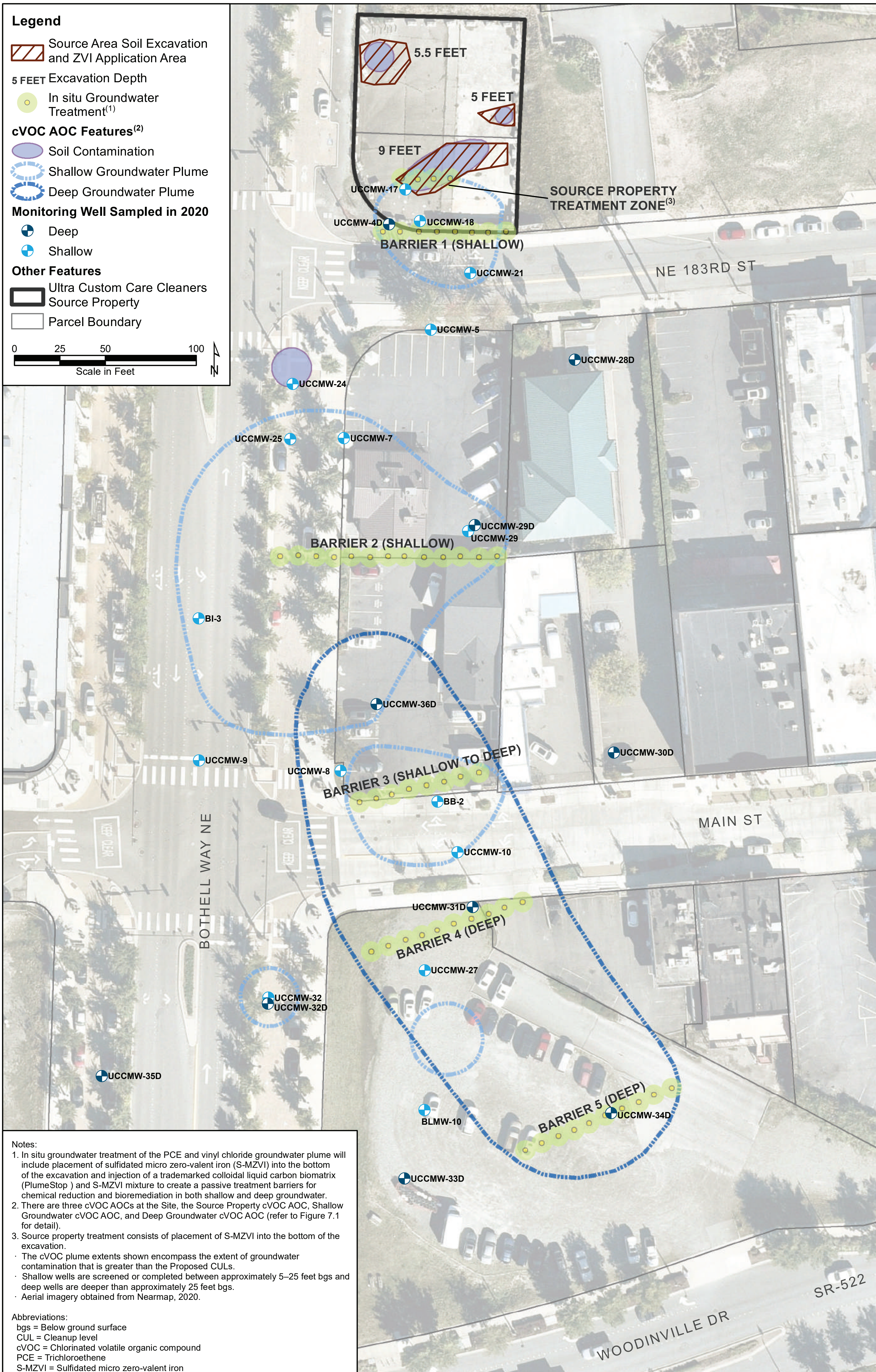
Figure 10.1
Alternative 1— Soil Excavation and Plume-wide Activated Carbon and S-MZVI Injection Barriers

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 10.1 Alternative 1 Soil Excavation and Plume-wide Activated Carbon and S-MZVI Injection Barriers.mxd
7/26/2021



Notes:
1. In situ groundwater treatment of the PCE and vinyl chloride groundwater plume will include placement of sulfidated micro zero-valent iron (S-MZVI) into the bottom of the excavation and injection of a trademarked colloidal liquid carbon biomatrix (PlumeStop) and S-MZVI mixture to create a passive treatment barriers for chemical reduction and bioremediation in both shallow and deep groundwater.
2. There are three cVOC AOCs at the Site, the Source Property cVOC AOC, Shallow Groundwater cVOC AOC, and Deep Groundwater cVOC AOC (refer to Figure 7.1 for detail).
3. Source property treatment consists of placement of S-MZVI into the bottom of the excavation.

- The cVOC plume extents shown encompass the extent of groundwater contamination that is greater than the Proposed CULs.
- Shallow wells are screened or completed between approximately 5–25 feet bgs and deep wells are deeper than approximately 25 feet bgs.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
PCE = Trichloroethene
S-MZVI = Sulfidated micro zero-valent iron

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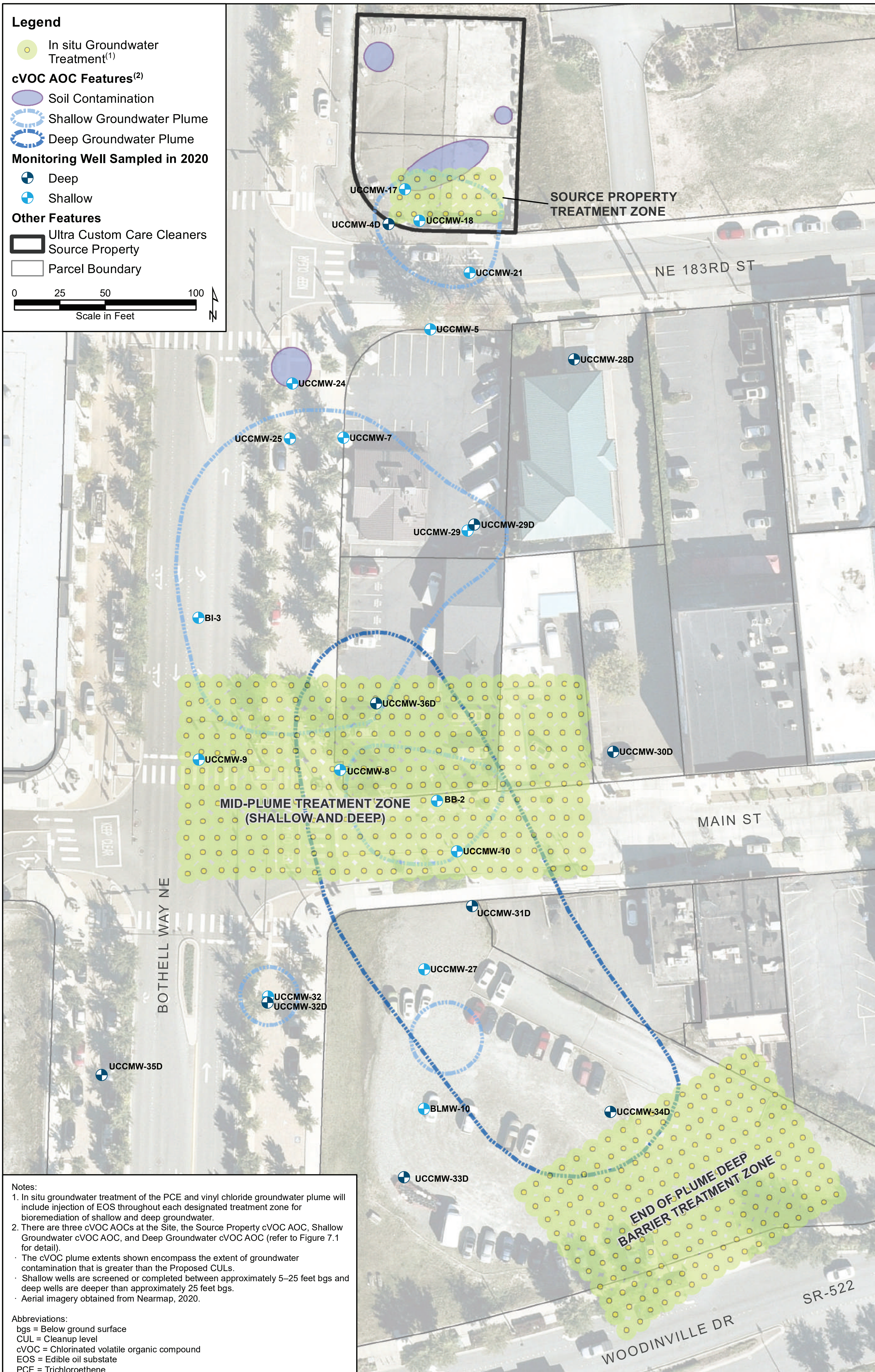
Figure 10.2
Alternative 2—Source Area Excavation, Targeted Activated Carbon and S-MZVI Injection Barriers

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 10.2 Alternative 2—Source Area Excavation, Targeted Activated Carbon and S-MZVI Injection Barriers.mxd
7/26/2021



Notes:
1. In situ groundwater treatment of the PCE and vinyl chloride groundwater plume will include injection of EOS throughout each designated treatment zone for bioremediation of shallow and deep groundwater.
2. There are three cVOC AOCs at the Site, the Source Property cVOC AOC, Shallow Groundwater cVOC AOC, and Deep Groundwater cVOC AOC (refer to Figure 7.1 for detail).
· The cVOC plume extents shown encompass the extent of groundwater contamination that is greater than the Proposed CULs.
· Shallow wells are screened or completed between approximately 5–25 feet bgs and deep wells are deeper than approximately 25 feet bgs.
· Aerial imagery obtained from Nearmap, 2020.

Abbreviations:
bgs = Below ground surface
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
EOS = Edible oil substate
PCE = Trichloroethene

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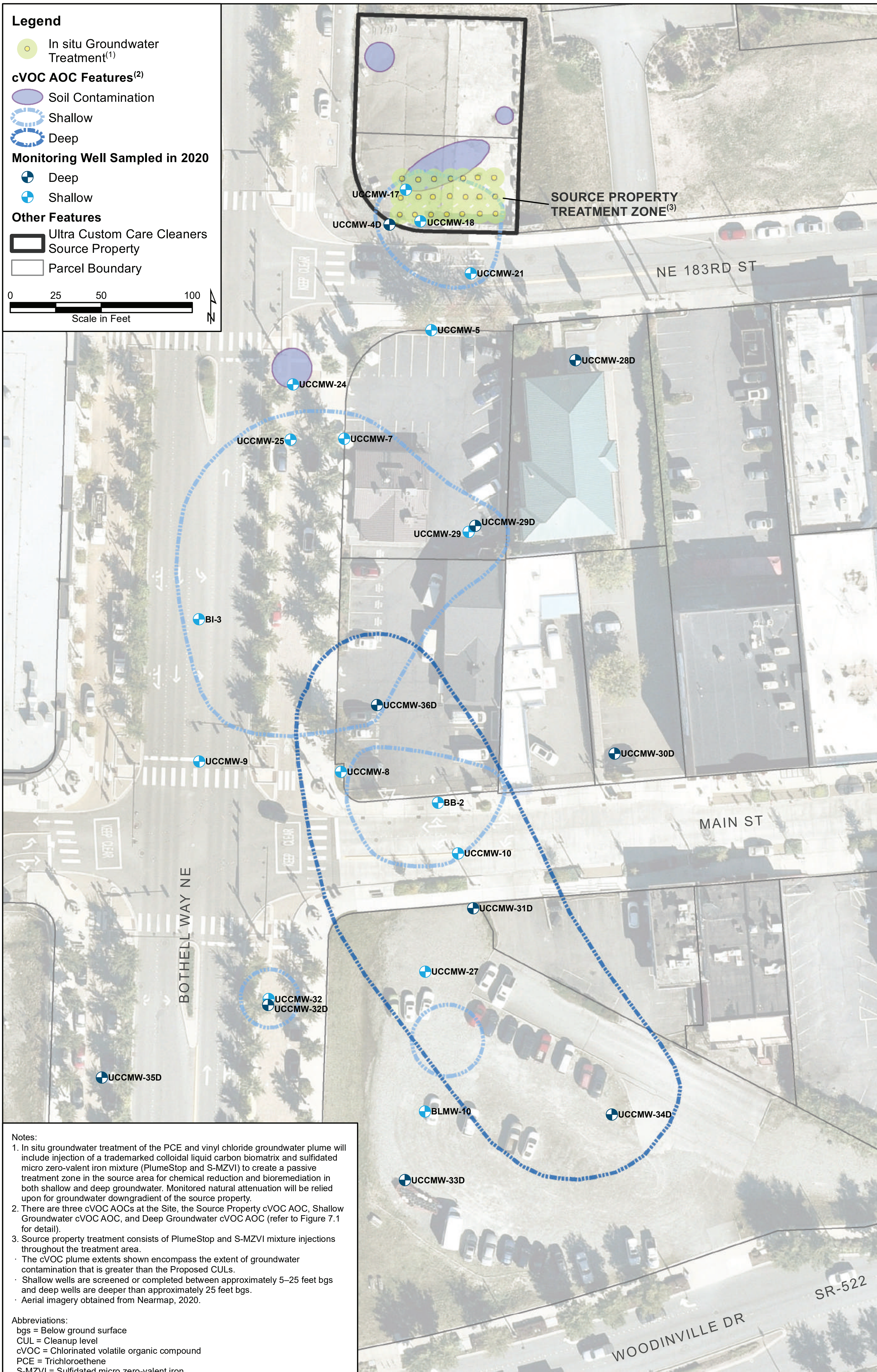
Figure 10.3
Alternative 3—In Situ Bioremediation Treatment Zones

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 10.3 Alternative 3 In Situ Bioremediation Treatment Zones.mxd
7/26/2021



Notes:

1. In situ groundwater treatment of the PCE and vinyl chloride groundwater plume will include injection of a trademarked colloidal liquid carbon biomatrix and sulfidated micro zero-valent iron mixture (PlumeStop and S-MZVI) to create a passive treatment zone in the source area for chemical reduction and bioremediation in both shallow and deep groundwater. Monitored natural attenuation will be relied upon for groundwater downgradient of the source property.
2. There are three cVOC AOCs at the Site, the Source Property cVOC AOC, Shallow Groundwater cVOC AOC, and Deep Groundwater cVOC AOC (refer to Figure 7.1 for detail).
3. Source property treatment consists of PlumeStop and S-MZVI mixture injections throughout the treatment area.

- The cVOC plume extents shown encompass the extent of groundwater contamination that is greater than the Proposed CULs.
- Shallow wells are screened or completed between approximately 5–25 feet bgs and deep wells are deeper than approximately 25 feet bgs.
- Aerial imagery obtained from Nearmap, 2020.

Abbreviations:

bgs = Below ground surface
CUL = Cleanup level
cVOC = Chlorinated volatile organic compound
PCE = Trichloroethene
S-MZVI = Sulfidated micro zero-valent iron

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Figure 10.4
Alternative 4—Source Area Treatment and Monitored Natural Attenuation

I:\GIS\Projects\COBothell-Ultra\MXD\RIFS\Figure 10.4 Alternative 4 Source Area Treatment and Monitored Natural Attenuation.mxd
7/26/2021

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Appendix A
Summary of Historical Sampling Reports

FINAL

Appendix A
Summary of Historical Sampling Reports

REPORTS REFERENCED TO COMPILE SUBSURFACE ENVIRONMENTAL DATA

CDM, 2009. Draft Phase II Environmental Site Assessment, City of Bothell Crossroads Redevelopment Project, Bothell, Washington, May.

CDM, 2011. Supplemental Phase II Environmental Site Assessment, Former Raincheck Cleaners – Offsite Area, 18304 Bothell Way NE, Bothell, Washington, April 17, 2011.

CDM Smith, 2013. City of Bothell Crossroads Redevelopment Project, SR 527 and SR 522 Bothell, Washington, draft letter report dated May 30, 2013.

Environmental Associates, Inc., 2016. Limited Subsurface Sampling and Testing, Lot 6 & Proposed Lot 8, Northeast Corner of Bothell Way at Northeast 183rd Street, Bothell, Washington, prepared for 360 Hotel Group, June 2, 2016.

EHS International, 2001a. Phase I Environmental Site Assessment, June 12, 2001, report to Bothell Police Department.

EHS International, 2001b. Phase II Environmental Site Assessment and Limited hazardous Materials Survey, August 15, 2001, report to Bothell Police Department.

Environmental Partners Inc., 2004. Chlorinated VOC Nature and Extent Investigation Letter Report, Case Property 18300-18304 Bothell Way NE, Bothell, WA. EPI Project No. 46101.0, November 30, 2004.

Farallon Consulting, 2002. Subsurface Investigation Report, Ultra Custom Care Cleaners Property 18300 – 18304 Bothell Way Northeast, Bothell, Washington, Farallon PN: 733001, April 19, 2002.

Farallon Consulting, 2016. Limited Groundwater Investigation Report, 10005 And 10011 Main Street Bothell, Washington, August 18, 2016.

HWA, 2011b. New City Hall Soil & Ground Water Sampling, Bothell, Washington, October 21, 2011.

HWA, 2011c. Case Property Inspection and Sampling, Bothell, Washington, November 29, 2011.

HWA, 2012. Bothell Way NE, Drainage Improvements, Soil & Ground Water Sampling, Bothell, Washington, January 9, 2012.

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HWA, 2014b. Ground Water Modeling- New City Hall Building, Bothell, Washington, July 14, 2014.

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Ultra Custom Care
Cleaners Site

Remedial Investigation and Feasibility Study

Appendix B
Historical Data within Study Area

FINAL

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-1	BLBH-23	CDM-B1	CDM-B2	CDM-B2
	Sample ID	**BB-1-W**	**BLBH-23-19W**	**CDM-B1-W**	**CDM-B2-W**	**CDM-B2Dup-W**
	Depth	10-20 ft	19-19 ft	6-6 ft	7-7 ft	7-7 ft
	Date	5/19/2009	9/4/2009	4/6/2009	4/2/2009	4/7/2009
BTEX						
Benzene	µg/L	0.2 U	1 U		1 U	1 U
Ethylbenzene	µg/L	0.2 U	1 U		1 U	1 U
Toluene	µg/L	1 U	1 U		1 U	1 U
Xylene (meta & para)	µg/L	0.4 U	1 U		1.3	1.5
Xylene (ortho)	µg/L	0.2 U	1 U		1 U	1 U
Xylene (total)	µg/L	1 U	1 U		1.3	1.5
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	1.6	5	4.2
Tetrachloroethene	µg/L	0.9	0.2 U	20	25	9.2
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	1.4	11	5.9
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SVOCs						
Naphthalene	µg/L	1 U				
Total Metals						
Arsenic	µg/L	180	3.3 U			
Barium	µg/L	2400				
Cadmium	µg/L	4.4 U				
Chromium	µg/L	930				
Lead	µg/L	380				
Mercury	µg/L	0.59				
Selenium	µg/L	11				
Silver	µg/L	11 U				
TPHs						
Diesel Range Organics	µg/L	280 U	320 U	270 U	260 U	260 U
Gasoline Range Organics	µg/L	100 U	100 U	110 U	210	380
Oil Range Organics	µg/L	450 U	510 U	430 U	420 U	420 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L	0.2 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-1	BLBH-23	CDM-B1	CDM-B2	CDM-B2
	Sample ID	**BB-1-W**	**BLBH-23-19W**	**CDM-B1-W**	**CDM-B2-W**	**CDM-B2Dup-W**
	Depth	10-20 ft	19-19 ft	6-6 ft	7-7 ft	7-7 ft
	Date	5/19/2009	9/4/2009	4/6/2009	4/2/2009	4/7/2009
VOCs						
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L	2 U				
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L	7.1				
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L	0.2 U				
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.22	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.25	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
iso-Propylbenzene	µg/L	0.2 U				
Methyl ethyl ketone	µg/L	5 U				
Methyl iso butyl ketone	µg/L	4.5				
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L	0.3				
n-Butylbenzene	µg/L	0.2 U				
n-Propylbenzene	µg/L	0.2 U				
sec-Butylbenzene	µg/L	0.2 U				
Styrene	µg/L	0.2 U				
tert-Butylbenzene	µg/L	0.2 U				
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L	2 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-032016**	**BB-2-082016**	**BB-2-112016**	**BB-2-032017**	**BB-2-031120**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/5/2016	8/11/2016	11/14/2016	3/10/2017	3/11/2020
BTEX						
Benzene	µg/L					0.4 U
Ethylbenzene	µg/L					0.4 U
Toluene	µg/L					2 U
Xylene (meta & para)	µg/L					0.8 U
Xylene (ortho)	µg/L					0.4 U
Xylene (total)	µg/L					0.8 U
Conventionals						
Dissolved Oxygen	mg/L					2.84
Nitrate	µg/L	3600	360	1700	1900	
ORP	mV					97.8
pH	pH					6.49
Sulfate	µg/L	9300	5700	9900	9200	
Total Organic Carbon	µg/L	1000 U	1700	1000 U	1600	
Turbidity	ntu					3.24
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.4 U	1.2	0.4 U	3.7	0.6
Tetrachloroethene	µg/L	73	46	70	66	80
trans-1,2-Dichloroethene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Trichloroethene	µg/L	0.4 U	0.44	0.4 U	0.4 U	0.97
Vinyl chloride	µg/L	0.4 U	0.68	0.4 U	0.4 U	0.046
Dissolved Gases						
Ethane	µg/L	0.5 U	44 U	3.6 U	19 U	0.22 UJ
Ethene	µg/L	0.5 U	3.4 U	0.64 U	2.3 U	0.29 UJ
Methane	µg/L	0.5 U	2200	290	1800	2 J
Dissolved Metals						
Sodium	µg/L			15000	15000	
SVOCs						
Naphthalene	µg/L					2 U
Total Metals						
Arsenic	µg/L					3.3 U
Sodium	µg/L	14000	19000	14000	15000	
TPHs						
Diesel Range Organics	µg/L					210 U
Gasoline Range Organics	µg/L					100 U
Oil Range Organics	µg/L					210 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1-Dichloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1-Dichloroethene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,1-Dichloropropene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-032016**	**BB-2-082016**	**BB-2-112016**	**BB-2-032017**	**BB-2-031120**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/5/2016	8/11/2016	11/14/2016	3/10/2017	3/11/2020
VOCs						
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,2,4-Trimethylbenzene	µg/L					0.4 U
1,2-Dibromo-3-chloropropane	µg/L	2.6 U	1 U		2 U	2 U
1,2-Dibromoethane	µg/L	0.4 U	0.2 U		0.4 U	0.04 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,2-Dichloroethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,2-Dichloropropane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,3,5-Trimethylbenzene	µg/L					0.4 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,3-Dichloropropane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
2,2-Dichloropropane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
2-Chloroethyl vinyl ether	µg/L	2.6 U	1 U		3.2 U	2 U
2-Chlorotoluene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
2-Hexanone	µg/L					4 U
4-Chlorotoluene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Acetone	µg/L					10 U
Bromobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Bromochloromethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Bromodichloromethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Bromoform	µg/L	2 U	1 U		2 U	2 U
Bromomethane	µg/L	0.74 U	0.2 U		0.4 U	0.4 U
Carbon disulfide	µg/L					0.4 U
Carbon tetrachloride	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Chlorobenzene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Chloroethane	µg/L	2 U	1 U		2 U	2 U
Chloroform	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Chloromethane	µg/L	2 U	1 U		2 U	2 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Cymene	µg/L					0.4 U
Dibromochloromethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Dibromomethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Dichlorodifluoromethane	µg/L	0.4 U	0.25 U		0.4 U	0.4 U
Hexachlorobutadiene	µg/L	0.4 U	0.2 U		0.4 U	2 U
Iodomethane	µg/L	5.4 U	1 U		2 U	3 U
iso-Propylbenzene	µg/L					0.4 U
Methyl ethyl ketone	µg/L					10 U
Methyl iso butyl ketone	µg/L					4 U
Methylene chloride	µg/L	4 U	1 U		2 U	2 U
Methyl-Tert-Butyl Ether	µg/L					0.4 U
n-Butylbenzene	µg/L					0.4 U
n-Propylbenzene	µg/L					0.4 U
sec-Butylbenzene	µg/L					0.4 U
Styrene	µg/L					0.4 U
tert-Butylbenzene	µg/L					0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-032016**	**BB-2-082016**	**BB-2-112016**	**BB-2-032017**	**BB-2-031120**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/5/2016	8/11/2016	11/14/2016	3/10/2017	3/11/2020
VOCs						
trans-1,3-Dichloropropene	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Trichlorofluoromethane	µg/L	0.4 U	0.2 U		0.4 U	0.4 U
Vinyl acetate	µg/L					2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-092009**	**BB-2-122009**	**CDM-RC-BB2-06/2**	**BB-2-062014**	**BB-2-092014**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	9/18/2009	12/18/2009	6/28/2011	6/10/2014	9/17/2014
Conventionals						
Nitrate	µg/L				3200	
Sulfate	µg/L				9400	
Total Organic Carbon	µg/L				1000 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Tetrachloroethene	µg/L	79	100	76	79	68
trans-1,2-Dichloroethene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Trichloroethene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Vinyl chloride	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Dissolved Gases						
Ethane	µg/L				1.2 U	
Ethene	µg/L				1.1 U	
Methane	µg/L				0.7 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1-Dichloroethene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,1-Dichloropropene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	5 U	2 U	2 U	2 U
1,2-Dibromoethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2-Dichlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2-Dichloroethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,3-Dichlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,3-Dichloropropane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
2,2-Dichloropropane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
2-Chloroethyl vinyl ether	µg/L	2 U	5 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
4-Chlorotoluene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Bromobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Bromochloromethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Bromodichloromethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Bromoform	µg/L	2 U	5 U	2 U	2 U	2 U
Bromomethane	µg/L	0.4 U	1 U	0.4 U	1.1 U	0.4 U
Carbon tetrachloride	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Chlorobenzene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Chloroethane	µg/L	2 U	5 U	2 U	2 U	2 U
Chloroform	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-092009**	**BB-2-122009**	**CDM-RC-BB2-06/2**	**BB-2-062014**	**BB-2-092014**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	9/18/2009	12/18/2009	6/28/2011	6/10/2014	9/17/2014
VOCs						
Chloromethane	µg/L	2 U	5 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Dibromochloromethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Dibromomethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Dichlorodifluoromethane	µg/L	0.4 U	1 U	0.4 U	0.54 U	0.4 U
Hexachlorobutadiene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Iodomethane	µg/L	2 U	5 U	2 U	4.8 U	2 U
Methylene chloride	µg/L	2 U	10 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U
Trichlorofluoromethane	µg/L	0.4 U	1 U	0.4 U	0.4 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-122014**	**BB-2-040215**	**BB-2-072015**	**BB-2-102215**	**BB-2-022016**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	12/12/2014	4/2/2015	7/22/2015	10/22/2015	2/1/2016
Conventionals						
Nitrate	µg/L		3500	3400	3000	3300
Sulfate	µg/L		8600	8900	9400	8800
Total Organic Carbon	µg/L		1000 U	1000 U	1000 U	1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Tetrachloroethene	µg/L	82	65	67	57	65
trans-1,2-Dichloroethene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Trichloroethene	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vinyl chloride	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Dissolved Gases						
Ethane	µg/L		0.5 U		0.5 U	0.5 U
Ethene	µg/L		0.5 U		0.5 U	0.5 U
Methane	µg/L		0.5 U		2.7	9.1
Dissolved Metals						
Sodium	µg/L			12000	14000	14000
Total Metals						
Sodium	µg/L		13000	14000	13000	14000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1-Dichloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1-Dichloroethene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,1-Dichloropropene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	2 U		2 U	2.6 U
1,2-Dibromoethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2-Dichloroethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,2-Dichloropropane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,3-Dichloropropane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
2,2-Dichloropropane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
2-Chloroethyl vinyl ether	µg/L	2.8 U	2 U		4 U	4.6 U
2-Chlorotoluene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
4-Chlorotoluene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Bromobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Bromochloromethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Bromodichloromethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Bromoform	µg/L	2 U	2 U		2 U	2 U
Bromomethane	µg/L	0.4 U	0.4 U		0.4 U	1.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-2	BB-2	BB-2	BB-2	BB-2
	Sample ID	**BB-2-122014**	**BB-2-040215**	**BB-2-072015**	**BB-2-102215**	**BB-2-022016**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	12/12/2014	4/2/2015	7/22/2015	10/22/2015	2/1/2016
VOCs						
Carbon tetrachloride	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Chlorobenzene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Chloroethane	µg/L	2 U	2 U		2 U	2 U
Chloroform	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Chloromethane	µg/L	2 U	2 U		2 U	2 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Dibromochloromethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Dibromomethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Dichlorodifluoromethane	µg/L	0.68 U	0.62 U		0.4 U	0.4 U
Hexachlorobutadiene	µg/L	0.5 U	0.4 U		0.4 U	0.4 U
Iodomethane	µg/L	5.2 U	2 U		3.2 U	8.6 U
Methylene chloride	µg/L	2 U	2 U		2 U	2 U
trans-1,3-Dichloropropene	µg/L	0.4 U	0.4 U		0.4 U	0.4 U
Trichlorofluoromethane	µg/L	0.4 U	0.4 U		0.4 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-042015**	**BB-3-072015**	**BB-3-012016**	**BB-3-082016**	**BB-3-032017**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	4/2/2015	7/9/2015	1/27/2016	8/10/2016	3/7/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.65
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.25	0.32
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.26 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1.9 U	1.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.27 U	0.29 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.31 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.4 U	2.2 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	3 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-042015**	**BB-3-072015**	**BB-3-012016**	**BB-3-082016**	**BB-3-032017**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	4/2/2015	7/9/2015	1/27/2016	8/10/2016	3/7/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-062014**	**BB-3-082014**	**BB-3-092014**	**BB-3-122014**	**BB-3-040215**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	6/4/2014	8/20/2014	9/19/2014	12/17/2014	4/2/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.75	0.42	1.5	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.28 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.6 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.33 U	0.2 U	0.2 U	0.31 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-062014**	**BB-3-082014**	**BB-3-092014**	**BB-3-122014**	**BB-3-040215**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	6/4/2014	8/20/2014	9/19/2014	12/17/2014	4/2/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-092009**	**BB-3-122009**	**CDM-RC-BB3-06/2**	**BB-3-032014**	**BB-3-052014**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	9/17/2009	12/18/2009	6/28/2011	3/13/2014	5/13/2014
Conventionals						
Nitrate	µg/L				3500	2600
Sulfate	µg/L				20000	18000
Total Organic Carbon	µg/L				1000 U	1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.52	0.2 U	0.2 U	0.3	0.21
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	0.5 U
Ethene	µg/L				0.5 U	0.5 U
Methane	µg/L				0.5 U	0.5 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1.9 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.22	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.82	0.2 U	0.21	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BB-3	BB-3	BB-3	BB-3	BB-3
	Sample ID	**BB-3-092009**	**BB-3-122009**	**CDM-RC-BB3-06/2**	**BB-3-032014**	**BB-3-052014**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	9/17/2009	12/18/2009	6/28/2011	3/13/2014	5/13/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	2 U	1 U	1.3 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BC-5	BC-5	BC-5	BI-3	BI-3
	Sample ID	**BC-5-092008**	**BC-5-092009**	**BC-5-122009**	**BI-3-062014**	**BI-3-092014**
	Depth	14-20 ft	14-20 ft	14-20 ft	5-10 ft	5-10 ft
	Date	9/5/2008	9/14/2009	12/15/2009	6/10/2014	9/17/2014
BTEX						
Benzene	µg/L	0.2 U	1 U	1 U		
Ethylbenzene	µg/L	0.2 U	1 U	1 U		
Toluene	µg/L	1 U	1 U	1 U		
Xylene (meta & para)	µg/L	0.4 U	1 U	1 U		
Xylene (ortho)	µg/L	0.2 U	1 U	1 U		
Xylene (total)	µg/L	0.4 U	1 U	1 U		
Conventionals						
Nitrate	µg/L				1300	
Sulfate	µg/L				10000	
Total Organic Carbon	µg/L				1800	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U			1.7	2.9
Tetrachloroethene	µg/L	0.2 U			4.5	2.1
trans-1,2-Dichloroethene	µg/L	0.2 U			0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U			0.43	0.52
Vinyl chloride	µg/L	0.2 U			0.26	1.6
Dissolved Gases						
Ethane	µg/L				1.2 U	
Ethene	µg/L				1.1 U	
Methane	µg/L				128	
Dissolved Metals						
Arsenic	µg/L		6.6	4.5		
SVOCs						
Naphthalene	µg/L	1 U				
TPHs						
Diesel Range Organics	µg/L	260 U	270 U	250 U		
Gasoline Range Organics	µg/L	100 U				
Oil Range Organics	µg/L	720	440 U	410 U		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U			0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U			0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U			0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U			1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U			0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U			0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U			0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BC-5	BC-5	BC-5	BI-3	BI-3
	Sample ID	**BC-5-092008**	**BC-5-092009**	**BC-5-122009**	**BI-3-062014**	**BI-3-092014**
	Depth	14-20 ft	14-20 ft	14-20 ft	5-10 ft	5-10 ft
	Date	9/5/2008	9/14/2009	12/15/2009	6/10/2014	9/17/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L	0.2 U				
1,3-Dichlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U			0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U			0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U			1 U	1 U
2-Chlorotoluene	µg/L	0.2 U			0.2 U	0.2 U
2-Hexanone	µg/L	2 U				
4-Chlorotoluene	µg/L	0.2 U			0.2 U	0.2 U
Acetone	µg/L	5 U				
Bromobenzene	µg/L	0.2 U			0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U			0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U			0.2 U	0.2 U
Bromoform	µg/L	1 U			1 U	1 U
Bromomethane	µg/L	0.2 U			0.54 U	0.2 U
Carbon disulfide	µg/L	0.24				
Carbon tetrachloride	µg/L	0.2 U			0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U			0.2 U	0.2 U
Chloroethane	µg/L	1 U			1 U	1 U
Chloroform	µg/L	0.2 U			0.2 U	0.2 U
Chloromethane	µg/L	1 U			1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U			0.2 U	0.2 U
Cymene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U			0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U			0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U			0.27 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U			0.2 U	0.2 U
Iodomethane	µg/L	1 U			2.4 U	1 U
iso-Propylbenzene	µg/L	0.2 U				
Methyl ethyl ketone	µg/L	5 U				
Methyl iso butyl ketone	µg/L	2 U				
Methylene chloride	µg/L	1 U			1 U	1 U
Methyl-Tert-Butyl Ether	µg/L	0.2 U				
n-Butylbenzene	µg/L	0.2 U				
n-Propylbenzene	µg/L	0.2 U				
sec-Butylbenzene	µg/L	0.2 U				
Styrene	µg/L	0.2 U				
tert-Butylbenzene	µg/L	0.2 U				
trans-1,3-Dichloropropene	µg/L	0.2 U			0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U			0.2 U	0.2 U
Vinyl acetate	µg/L	2 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	BI-3	BI-3	BLMW-1	BLMW-1	BLMW-1
	Sample ID	**BI-3-032017**	**BI-3-030920**	**BLMW-1-092009**	**BLMW-1-122009**	**BLMW-1-062014**
	Depth	5-10 ft	5-10 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/8/2017	3/9/2020	9/16/2009	12/17/2009	6/11/2014
BTEX						
Benzene	µg/L		0.2 U	1 U	1 U	1 U
Ethylbenzene	µg/L		0.2 U	1 U	1 U	1 U
Toluene	µg/L		1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L		0.4 U	1 U	1 U	1 U
Xylene (ortho)	µg/L		0.2 U	1 U	1 U	1 U
Xylene (total)	µg/L		0.4 U	1 U	1 U	2
Conventionals						
Dissolved Oxygen	mg/L		0.83			
ORP	mV		53.8			
pH	pH		6.53			
Turbidity	ntu		14.66			
cVOCs						
cis-1,2-Dichloroethene	µg/L	4	2.4	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.92	1.1	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.9	0.39	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.74	0.52	0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L			3 U	3 U	6.6
Cadmium	µg/L					4
Chromium	µg/L					10
Lead	µg/L					1
SVOCs						
Naphthalene	µg/L		1 U			
Total Metals						
Arsenic	µg/L		3.3 U	3.3 U	3.3 U	10
TPHs						
Diesel Range Organics	µg/L			280 U	260 U	280
Gasoline Range Organics	µg/L			100 U	100 U	100
Oil Range Organics	µg/L			440 U	410 U	450
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U			
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BI-3	BI-3	BLMW-1	BLMW-1	BLMW-1
	Sample ID	**BI-3-032017**	**BI-3-030920**	**BLMW-1-092009**	**BLMW-1-122009**	**BLMW-1-062014**
	Depth	5-10 ft	5-10 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/8/2017	3/9/2020	9/16/2009	12/17/2009	6/11/2014
VOCs						
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L		0.2 U			
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.6 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U			
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U			
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.35 U
Carbon disulfide	µg/L		0.2 U			
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U			
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	1 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.5 U	1 U	1 U	2.1 U
iso-Propylbenzene	µg/L		0.2 U			
Methyl ethyl ketone	µg/L		5 U			
Methyl iso butyl ketone	µg/L		2 U			
Methylene chloride	µg/L	1 U	1 U	1 U	2 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U			
n-Butylbenzene	µg/L		0.2 U			
n-Propylbenzene	µg/L		0.2 U			
sec-Butylbenzene	µg/L		0.2 U			
Styrene	µg/L		0.2 U			
tert-Butylbenzene	µg/L		0.2 U			
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		1 U			

Table B.1
Historical Groundwater Data within Study Area

	Location	BI-3	BI-3	BI-3	BI-3	BI-3
	Sample ID	**BI-3-122014**	**BI-3-032015**	**BI-3-072015**	**BI-3-102015**	**BI-3-012016**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	12/17/2014	3/30/2015	7/9/2015	10/22/2015	1/28/2016
cVOCs						
cis-1,2-Dichloroethene	µg/L	2.4	3.1	2.6	1	1
Tetrachloroethene	µg/L	2.5	1.5	0.68	0.52	0.2 U
trans-1,2-Dichloroethene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	35	0.27	0.37	0.2 U	0.2 U
Vinyl chloride	µg/L	1.5	1.1	1.5	0.96	0.83
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L		0.2 U	0.26 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L		1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L		1 U	1 U	2 U	1 U
2-Chlorotoluene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L		1 U	1 U	1 U	1 U
Bromomethane	µg/L		0.2 U	0.2 U	0.2 U	0.27 U
Carbon tetrachloride	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L		1 U	1 U	1 U	1 U
Chloroform	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L		1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L		1 U	1 U	1.6 U	1.4 U
Methylene chloride	µg/L		1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BI-3	BI-3	BI-3	BI-3	BI-3
	Sample ID	**BI-3-122014**	**BI-3-032015**	**BI-3-072015**	**BI-3-102015**	**BI-3-012016**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	12/17/2014	3/30/2015	7/9/2015	10/22/2015	1/28/2016
VOCs						
trans-1,3-Dichloropropene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-1	BLMW-1	BLMW-1	BLMW-1	BLMW-3
	Sample ID	**BLMW-1-092014**	**BLMW-1-092014**	**BLMW-1-122014**	**BLMW-1-032015**	**BLMW-3-092009**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/11/2014	9/17/2014	12/8/2014	3/25/2015	9/17/2009
BTEX						
Benzene	µg/L	1 U		1 U	1 U	15
Ethylbenzene	µg/L	1 U		1 U	1 U	1 U
Toluene	µg/L	5 U		1 U	1 U	1 U
Xylene (meta & para)	µg/L	5 U		1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U		1 U	1 U	1 U
Xylene (total)	µg/L	5 U		2	1 U	1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	27	0.2 U	1.8
Tetrachloroethene	µg/L	0.2 U	4.3	80	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	2.6	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	14	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.38
Dissolved Metals						
Arsenic	µg/L	30		3	3 U	3 U
Cadmium	µg/L	4.4 U		4	4 U	
Chromium	µg/L	86		10	10 U	
Lead	µg/L	74		1	1 U	
Total Metals						
Arsenic	µg/L					3.9
TPHs						
Diesel Range Organics	µg/L	260 U		260	260 U	280 U
Gasoline Range Organics	µg/L	100 U		100	100 U	100 U
Oil Range Organics	µg/L	410 U		410	410 U	440 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	2 U	2.6 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-1	BLMW-1	BLMW-1	BLMW-1	BLMW-3
	Sample ID	**BLMW-1-092014**	**BLMW-1-092014**	**BLMW-1-122014**	**BLMW-1-032015**	**BLMW-3-092009**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/11/2014	9/17/2014	12/8/2014	3/25/2015	9/17/2009
VOCs						
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.32 U	0.25 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.3 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	2 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-10	BLMW-10	BLMW-10	BLMW-10	BLMW-10
	Sample ID	**BLMW-10-062014**	**BLMW-10-092014**	**BLMW-10-122014**	**BLMW-10-032015**	**BLMW-10-030920**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	6/13/2014	9/11/2014	12/8/2014	3/25/2015	3/9/2020
BTEX						
Benzene	µg/L	1 U	1 U	1 U	1 U	0.2 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	0.2 U
Toluene	µg/L	1 U	5 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	5 U	1 U	1 U	0.4 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	0.2 U
Xylene (total)	µg/L	2	5 U	2	1 U	0.4 U
Conventionals						
Dissolved Oxygen	mg/L					0.53
ORP	mV					-9.5
pH	pH					6.49
Turbidity	ntu					1.92
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	1
Tetrachloroethene	µg/L	4	3	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.024
Dissolved Gases						
Ethane	µg/L					0.22 UJ
Ethene	µg/L					0.29 UJ
Methane	µg/L					150 J
Dissolved Metals						
Arsenic	µg/L	3	3 U	3	3 U	
Cadmium	µg/L	4	4 U	4	4 U	
Chromium	µg/L	10	10 U	10	10 U	
Lead	µg/L	1	1 U	1	1 U	
SVOCs						
Naphthalene	µg/L					1 U
Total Metals						
Arsenic	µg/L					3.5
TPHs						
Diesel Range Organics	µg/L	250	260 U	260	260 U	200 U
Gasoline Range Organics	µg/L	100	100 U	100	100 U	100 U
Oil Range Organics	µg/L	410	410 U	410	410 U	210 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-10	BLMW-10	BLMW-10	BLMW-10	BLMW-10
	Sample ID	**BLMW-10-062014**	**BLMW-10-092014**	**BLMW-10-122014**	**BLMW-10-032015**	**BLMW-10-030920**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	6/13/2014	9/11/2014	12/8/2014	3/25/2015	3/9/2020
VOCs						
1,2,4-Trimethylbenzene	µg/L					0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L					0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	5.1 U	2.6 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L					2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L					5 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.35 U	0.2 U	0.32 U	0.25 U	1 U
Carbon disulfide	µg/L					0.26 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L					0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.3 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	1 U
Iodomethane	µg/L	2.1 U	1 U	3.6 U	1 U	2.1 U
iso-Propylbenzene	µg/L					0.2 U
Methyl ethyl ketone	µg/L					5 U
Methyl iso butyl ketone	µg/L					2 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L					0.2 U
n-Butylbenzene	µg/L					0.2 U
n-Propylbenzene	µg/L					0.2 U
sec-Butylbenzene	µg/L					0.2 U
Styrene	µg/L					0.2 U
tert-Butylbenzene	µg/L					0.2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-10	BLMW-10	BLMW-10	BLMW-10	BLMW-10
	Sample ID	**BLMW-10-062014**	**BLMW-10-092014**	**BLMW-10-122014**	**BLMW-10-032015**	**BLMW-10-030920**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	6/13/2014	9/11/2014	12/8/2014	3/25/2015	3/9/2020
VOCs						
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L					1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-3	BLMW-4	BLMW-4	BLMW-4	BLMW-4
	Sample ID	**BLMW-3-122009**	**BLMW-4-092009**	**LMW-4Dup-09200**	**LMW-4Dup-12200**	**BLMW-4-122009**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/17/2009	9/16/2009	9/16/2009	12/17/2009	12/17/2009
BTEX						
Benzene	µg/L	3.6	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	1 U	1 U	1 U	1 U	1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	2	0.6	0.57	0.46	0.46
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.24	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L	3 U	3 U	3 U	3.9	3.5
Total Metals						
Arsenic	µg/L	3.6	3.3 U	3.3 U	3.5	3.4
TPHs						
Diesel Range Organics	µg/L	260 U	290 U	280 U	260 U	250 U
Gasoline Range Organics	µg/L	100 U	100 U	100 U	100 U	100 U
Oil Range Organics	µg/L	410 U	460 U	450 U	410 U	400 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-3	BLMW-4	BLMW-4	BLMW-4	BLMW-4
	Sample ID	**BLMW-3-122009**	**BLMW-4-092009**	**LMW-4Dup-09200**	**LMW-4Dup-12200**	**BLMW-4-122009**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/17/2009	9/16/2009	9/16/2009	12/17/2009	12/17/2009
VOCs						
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-5	BLMW-5	BLMW-5R	BLMW-5R	BLMW-5R
	Sample ID	**BLMW-5-092009**	**BLMW-5-122009**	**BLMW-5R-092014**	**BLMW-5R-122014**	**BLMW-5R-032015**
	Depth	5-10 ft	5-10 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/16/2009	12/17/2009	9/10/2014	12/8/2014	3/25/2015
BTEX						
Benzene	µg/L	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	1 U	1 U	1 U	2	1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L	3 U	3 U	3 U	3	3 U
Cadmium	µg/L			4 U	4	4 U
Chromium	µg/L			10 U	10	10 U
Lead	µg/L			1 U	1	1 U
Total Metals						
Arsenic	µg/L	3.3 U	3.3 U			
TPHs						
Diesel Range Organics	µg/L	270 U	270 U	260 U	260	260 U
Gasoline Range Organics	µg/L	100 U	100 U	100 U	100	100 U
Oil Range Organics	µg/L	440 U	430 U	410 U	410	410 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	5.1 U	2.6 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-5	BLMW-5	BLMW-5R	BLMW-5R	BLMW-5R
	Sample ID	**BLMW-5-092009**	**BLMW-5-122009**	**BLMW-5R-092014**	**BLMW-5R-122014**	**BLMW-5R-032015**
	Depth	5-10 ft	5-10 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/16/2009	12/17/2009	9/10/2014	12/8/2014	3/25/2015
VOCs						
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.32 U	0.25 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.3 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	3.6 U	1 U
Methylene chloride	µg/L	1 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-7	BLMW-7	BLMW-7	BLMW-7	BLMW-7
	Sample ID	**BLMW-7-092009**	**BLMW-7-122009**	**BLMW-7-092014**	**BLMW-7-122014**	**BLMW-7-032015**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	9/16/2009	12/17/2009	9/10/2014	12/8/2014	3/25/2015
BTEX						
Benzene	µg/L	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	1 U	1 U	1 U	2	1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.96	0.71	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.22	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L	3 U	3 U	3 U	3	3 U
Cadmium	µg/L			4 U	4	4 U
Chromium	µg/L			10 U	10	10 U
Lead	µg/L			1 U	1	1 U
Total Metals						
Arsenic	µg/L	3.3 U	3.3 U			
TPHs						
Diesel Range Organics	µg/L	250 U	250 U	260 U	260	260 U
Gasoline Range Organics	µg/L	100 U	100 U	100 U	100	100 U
Oil Range Organics	µg/L	400 U	400 U	410 U	410	410 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	5.1 U	2.6 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-7	BLMW-7	BLMW-7	BLMW-7	BLMW-7
	Sample ID	**BLMW-7-092009**	**BLMW-7-122009**	**BLMW-7-092014**	**BLMW-7-122014**	**BLMW-7-032015**
	Depth	5-10 ft	5-10 ft	5-10 ft	5-10 ft	5-10 ft
	Date	9/16/2009	12/17/2009	9/10/2014	12/8/2014	3/25/2015
VOCs						
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.32 U	0.25 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.91	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.3 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	3.6 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-8	BLMW-9	BLMW-9	BLMW-9	BLMW-9
	Sample ID	**BLMW-8-032015**	**BLMW-9-062014**	**BLMW-9-092014**	**BLMW-9-122014**	**BLMW-9-032015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/30/2015	6/13/2014	9/11/2014	12/8/2014	3/25/2015
BTEX						
Benzene	µg/L	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	5 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1 U	5 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	1 U	2	5 U	2	1 U
Conventionals						
Alkalinity (as CaCO3)	µg/L	170000				
Nitrate	µg/L	140				
Sulfate	µg/L	5000 U				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Methane	µg/L	1100				
Dissolved Metals						
Arsenic	µg/L	3 U	3	6.1	3	3.2
Cadmium	µg/L		4	4 U	4	4 U
Chromium	µg/L		10	10 U	10	10 U
Lead	µg/L		1	1 U	1	1 U
Manganese	µg/L	1200				
Total Metals						
Arsenic	µg/L	3.3 U				
TPHs						
Diesel Range Organics	µg/L	300	250	260 U	250	260 U
Gasoline Range Organics	µg/L	100 U	100	100 U	100	100 U
Oil Range Organics	µg/L	560	410	410 U	410	410 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-8	BLMW-9	BLMW-9	BLMW-9	BLMW-9
	Sample ID	**BLMW-8-032015**	**BLMW-9-062014**	**BLMW-9-092014**	**BLMW-9-122014**	**BLMW-9-032015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/30/2015	6/13/2014	9/11/2014	12/8/2014	3/25/2015
VOCs						
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	5.1 U	2.6 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.39 U	0.2 U	0.32 U	0.25 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.3 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	2.1 U	1 U	3.6 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-8	BLMW-8	BLMW-8	BLMW-8	BLMW-8
	Sample ID	**LMW-8D-25-09200**	**BLMW-8-092009**	**BLMW-8-122009**	**BLMW-8-092014**	**BLMW-8-122014**
	Depth	25-25 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/4/2009	9/16/2009	12/17/2009	9/10/2014	12/16/2014
BTEX						
Benzene	µg/L	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	1 U	1 U	1 U	1 U	1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.61	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.69
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L		3 U	3 U	3 U	3 U
Cadmium	µg/L				4 U	
Chromium	µg/L				10 U	
Lead	µg/L				1 U	
Total Metals						
Arsenic	µg/L	3.3 U	3.3 U	4.2		3.3 U
TPHs						
Diesel Range Organics	µg/L	300 U	320 U	250 U	280	260 U
Gasoline Range Organics	µg/L	100 U	100 U	100 U	100 U	100 U
Oil Range Organics	µg/L	470 U	500 U	410 U	540	630
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.82	0.69	0.23	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	3.6 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	BLMW-8	BLMW-8	BLMW-8	BLMW-8	BLMW-8
	Sample ID	**LMW-8D-25-09200**	**BLMW-8-092009**	**BLMW-8-122009**	**BLMW-8-092014**	**BLMW-8-122014**
	Depth	25-25 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	9/4/2009	9/16/2009	12/17/2009	9/10/2014	12/16/2014
VOCs						
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.37	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1.9 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B12	CDM-B13	CDM-B18	CDM-B19	CDM-B20
	Sample ID	**CDM-B12-W**	**CDM-B13-W**	**CDM-B18-W**	**CDM-RC-B19-06/27**	**CDM-RC-B20-06/27**
	Depth	5-5 ft	6-6 ft	7-7 ft	5-8 ft	8-12 ft
	Date	4/7/2009	4/2/2009	4/7/2009	6/27/2011	6/27/2011
BTEX						
Benzene	µg/L			13		
Ethylbenzene	µg/L			4 U		
Toluene	µg/L			4 U		
Xylene (meta & para)	µg/L			4 U		
Xylene (ortho)	µg/L			4 U		
Xylene (total)	µg/L			4 U		
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	6	0.2 U	0.2 U
Tetrachloroethene	µg/L	57	1.1	57	1.4	0.2 U
trans-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.4 U	0.2 U	9.9	0.2 U	0.2 U
Vinyl chloride	µg/L	0.4 U	0.2 U	2.7	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L	260 U	250 U	260 U		
Gasoline Range Organics	µg/L	100 U	100 U	400 U		
Oil Range Organics	µg/L	410 U	400 U	420 U		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	1 U	2 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	1 U	2 U	1 U	1 U
2-Chlorotoluene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Bromoform	µg/L	2 U	1 U	2 U	1 U	1 U
Bromomethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B12	CDM-B13	CDM-B18	CDM-B19	CDM-B20
	Sample ID	**CDM-B12-W**	**CDM-B13-W**	**CDM-B18-W**	**CDM-RC-B19-06/27**	**CDM-RC-B20-06/27**
	Depth	5-5 ft	6-6 ft	7-7 ft	5-8 ft	8-12 ft
	Date	4/7/2009	4/2/2009	4/7/2009	6/27/2011	6/27/2011
VOCs						
Chlorobenzene	µg/L	0.4 U	0.2 U	0.55	0.2 U	0.2 U
Chloroethane	µg/L	2 U	1 U	2 U	1 U	1 U
Chloroform	µg/L	1.5	0.2 U	0.4 U	2.4	0.2 U
Chloromethane	µg/L	2 U	1 U	2 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Iodomethane	µg/L	2 U	1 U	2 U	1 U	1 U
Methylene chloride	µg/L	2 U	1 U	2 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B21	CDM-B24	CDM-B25	CDM-B26	CDM-B27
	Sample ID	**CDM-RC-B21-06/2**	**CDM-RC-B24-06/2**	**CDM-RC-B25-06/2**	**CDM-RC-B26-06/2**	**CDM-RC-B27-06/2**
	Depth	15-16 ft	9-12 ft	11-13 ft	5.5-8 ft	14-19 ft
	Date	6/27/2011	6/27/2011	6/27/2011	6/27/2011	6/28/2011
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.4	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	2.6	0.2 U	0.2 U	0.2 U	0.82
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B21	CDM-B24	CDM-B25	CDM-B26	CDM-B27
	Sample ID	**CDM-RC-B21-06/27**	**CDM-RC-B24-06/27**	**CDM-RC-B25-06/27**	**CDM-RC-B26-06/27**	**CDM-RC-B27-06/28**
	Depth	15-16 ft	9-12 ft	11-13 ft	5.5-8 ft	14-19 ft
	Date	6/27/2011	6/27/2011	6/27/2011	6/27/2011	6/28/2011
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B28	CDM-B28	CDM-B29	CDM-B29	CDM-B30
	Sample ID	**CDM-RC-B28-06/28**	**M-RC-B28Dup-06**	**CDM-RC-B29-06/28**	**M-RC-B29Dup-06/**	**CDM-B30-05/13**
	Depth	4.5-8 ft	4.5-8 ft	5.5-8 ft	5.5-8 ft	7-10 ft
	Date	6/28/2011	6/28/2011	6/28/2011	6/28/2011	5/10/2013
BTEX						
Benzene	µg/L					0.2 U
Ethylbenzene	µg/L					0.2 U
Toluene	µg/L					1 U
Xylene (meta & para)	µg/L					1 U
Xylene (ortho)	µg/L					0.21
Xylene (total)	µg/L					0.21
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.32	0.3	0.2 U
Tetrachloroethene	µg/L	2.1	2.7	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	2.7	2.3	0.2 U
TPHs						
Gasoline Range Organics	µg/L					330
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.26 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.58	0.56	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B28	CDM-B28	CDM-B29	CDM-B29	CDM-B30
	Sample ID	**CDM-RC-B28-06/28**	**M-RC-B28Dup-06**	**CDM-RC-B29-06/28**	**M-RC-B29Dup-06/**	**CDM-B30-05/13**
	Depth	4.5-8 ft	4.5-8 ft	5.5-8 ft	5.5-8 ft	7-10 ft
	Date	6/28/2011	6/28/2011	6/28/2011	6/28/2011	5/10/2013
VOCs						
Chloroform	µg/L	1	1.1	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.26 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B3	CDM-B7	CDM-B8	CDM-B10	CDM-B11
	Sample ID	**CDM-B3-W**	**CDM-B7-W**	**CDM-B8-W**	**CDM-B10-W**	**CDM-B11-W**
	Depth	9-9 ft	9-9 ft	7-7 ft	6-6 ft	6-6 ft
	Date	4/2/2009	4/1/2009	4/7/2009	4/7/2009	4/7/2009
BTEX						
Benzene	µg/L	5.7				
Ethylbenzene	µg/L	3.5				
Toluene	µg/L	1 U				
Xylene (meta & para)	µg/L	4.1				
Xylene (ortho)	µg/L	1 U				
Xylene (total)	µg/L	4.1				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Tetrachloroethene	µg/L	20	0.2 U	0.37	54	49
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
TPHs						
Diesel Range Organics	µg/L	300 U	260 U			
Gasoline Range Organics	µg/L	270	110 U			
Oil Range Organics	µg/L	490 U	420 U			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	2 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	20 U	0.2 U	0.4 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	2 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B3	CDM-B7	CDM-B8	CDM-B10	CDM-B11
	Sample ID	**CDM-B3-W**	**CDM-B7-W**	**CDM-B8-W**	**CDM-B10-W**	**CDM-B11-W**
	Depth	9-9 ft	9-9 ft	7-7 ft	6-6 ft	6-6 ft
	Date	4/2/2009	4/1/2009	4/7/2009	4/7/2009	4/7/2009
VOCs						
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	2 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.22	1.6	1.6
Chloromethane	µg/L	1 U	1 U	1 U	2 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	2 U	1 U
Methylene chloride	µg/L	1 U	2 U	1 U	2 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B31	CDM-B32	CDM-B33	CDM-B34	CDM-B34
	Sample ID	**CDM-B31-05/13**	**CDM-B32-05/13**	**CDM-B33-05/13**	**CDM-B34-05/13**	**CDM-B34Dup-05/1**
	Depth	7-10 ft	5-8 ft	7-10 ft	8-11 ft	5-8 ft
	Date	5/10/2013	5/10/2013	5/10/2013	5/10/2013	5/10/2013
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.37	0.33
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	2.2	2.2
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.33	0.31
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.81	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	CDM-B31	CDM-B32	CDM-B33	CDM-B34	CDM-B34
	Sample ID	**CDM-B31-05/13**	**CDM-B32-05/13**	**CDM-B33-05/13**	**CDM-B34-05/13**	**CDM-B34Dup-05/1**
	Depth	7-10 ft	5-8 ft	7-10 ft	8-11 ft	5-8 ft
	Date	5/10/2013	5/10/2013	5/10/2013	5/10/2013	5/10/2013
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIa-B1	EAIa-B2	EAIa-B3	EAIa-B4	EAIa-B5
	Sample ID	**EAIa-B1-water**	**EAIa-B2-water**	**EAIa-B3-water**	**EAIa-B4-water**	**EAIa-B5-water**
	Depth	19-23 ft	19-23 ft	19-23 ft	19-23 ft	24-28 ft
	Date	5/3/2016	5/3/2016	5/3/2016	5/3/2016	5/3/2016
BTEX						
Benzene	µg/L				1 U	
Ethylbenzene	µg/L				1 U	
Toluene	µg/L				1 U	
Xylene (total)	µg/L				3 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L				100 U	
Gasoline Range Organics	µg/L				100 U	
Oil Range Organics	µg/L				500 U	
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIa-B11	EAIb-B1	EAIb-B2	EAIb-B3	EAIb-B4
	Sample ID	**EAIa-B11-water**	**EAIb-B1-water**	**EAIb-B2-water**	**EAIb-B3-water**	**EAIb-B4-water**
	Depth	11-15 ft	15-20 ft	15-20 ft	15-20 ft	12-17 ft
	Date	5/4/2016	5/10/2016	5/10/2016	5/10/2016	5/10/2016
BTEX						
Benzene	µg/L	1 U				1 U
Ethylbenzene	µg/L	1 U				1 U
Toluene	µg/L	1 U				1 U
Xylene (total)	µg/L	3 U				3 U
cVOCs						
cis-1,2-Dichloroethene	µg/L		1 U	1 U	1 U	1 U
Tetrachloroethene	µg/L		1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L		1 U	1 U	1 U	1 U
Trichloroethene	µg/L		1 U	1 U	1 U	1 U
Vinyl chloride	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L	57 CN				50 U
Gasoline Range Organics	µg/L	100 U				100 U
Oil Range Organics	µg/L	250 U				250 U
VOCs						
1,1,1-Trichloroethane	µg/L		1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L		1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L		1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L		1 U	1 U	1 U	1 U
Chloroethane	µg/L		1 U	1 U	1 U	1 U
Methylene chloride	µg/L		5 U	5 U	5 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIa-B6	EAIa-B7	EAIa-B8	EAIa-B9	EAIa-B10
	Sample ID	**EAIa-B6-water**	**EAIa-B7-water**	**EAIa-B8-water**	**EAIa-B9-water**	**EAIa-B10-water**
	Depth	24-28 ft	20-24 ft	18-20 ft	11-15 ft	16-20 ft
	Date	5/4/2016	5/4/2016	5/4/2016	5/4/2016	5/4/2016
BTEX						
Benzene	µg/L		1 U	1 U	1 U	1 U
Ethylbenzene	µg/L		1 U	1 U	1 U	1 U
Toluene	µg/L		1 U	1 U	1 U	1 U
Xylene (total)	µg/L		3 U	3 U	3 U	3 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U		1 U
Tetrachloroethene	µg/L	1 U	1 U	1 U		1 U
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U		1 U
Trichloroethene	µg/L	1 U	1 U	1 U		1 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Dissolved Metals						
Arsenic	µg/L			1.09		1 U
Cadmium	µg/L			1 U		1 U
Chromium	µg/L			2.67		1 U
Lead	µg/L			1 U		1 U
Mercury	µg/L			1 U		1 U
TPHs						
Diesel Range Organics	µg/L		50 U	510 CN	130 CN	200 CN
Gasoline Range Organics	µg/L		100 U	100 U	100 U	100 U
Oil Range Organics	µg/L		250 U	370 U	250 U	430 U
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U		1 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U		1 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U		1 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U		1 U
Chloroethane	µg/L	1 U	1 U	1 U		1 U
Methylene chloride	µg/L	5 U	5 U	5 U		5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIa-Geotech Well	INJ-2	INJ-2	INJ-2	INJ-2
	Sample ID	**EAIa-Geotech Wel**	**HWA-INJ-2-020215**	**INJ-2-032015**	**INJ-2-072015**	**INJ-2-012016**
	Depth	15-20 ft	8-23 ft	8-23 ft	8-23 ft	8-23 ft
	Date	5/17/2016	2/2/2015	3/24/2015	7/17/2015	1/28/2016
Conventionals						
Nitrate	µg/L		7100			
Sulfate	µg/L		55000			
Total Organic Carbon	µg/L		5700			
cVOCs						
cis-1,2-Dichloroethene	µg/L		0.53	7	16	910
Tetrachloroethene	µg/L		9.3	91	490	1300
trans-1,2-Dichloroethene	µg/L		0.2 U	0.4 U	2 U	4 U
Trichloroethene	µg/L		0.29	3.7	2 U	17
Vinyl chloride	µg/L		0.2 U	0.4 U	2 U	4.6
Dissolved Gases						
Ethane	µg/L		0.5 U			
Ethene	µg/L		0.5 U			
Methane	µg/L		1			
Total Metals						
Sodium	µg/L		22000			
TPHs						
Diesel Range Organics	µg/L	50 U				
Oil Range Organics	µg/L	250 U				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,1,1-Trichloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,1,2,2-Tetrachloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,1,2-Trichloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,1-Dichloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,1-Dichloroethene	µg/L		0.2 U	0.4 U	2 U	4 U
1,1-Dichloropropene	µg/L		0.2 U	0.4 U	2 U	4 U
1,2,3-Trichlorobenzene	µg/L		0.2 U	0.4 U	3.9 U	4 U
1,2,3-Trichloropropane	µg/L		0.2 U	0.4 U	2 U	4 U
1,2,4-Trichlorobenzene	µg/L		0.2 U	0.4 U	3.6 U	4 U
1,2-Dibromo-3-chloropropane	µg/L		1 U	2 U	10 U	20 U
1,2-Dibromoethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,2-Dichlorobenzene	µg/L		0.2 U	0.4 U	2 U	4 U
1,2-Dichloroethane	µg/L		0.2 U	0.4 U	2 U	4 U
1,2-Dichloropropane	µg/L		0.2 U	0.4 U	2 U	4 U
1,3-Dichlorobenzene	µg/L		0.2 U	0.4 U	2 U	4 U
1,3-Dichloropropane	µg/L		0.2 U	0.4 U	2 U	4 U
1,4-Dichlorobenzene	µg/L		0.2 U	0.4 U	2 U	4 U
2,2-Dichloropropane	µg/L		0.2 U	0.4 U	2 U	4 U
2-Chloroethyl vinyl ether	µg/L		1 U	6.8 U	20 U	20 U
2-Chlorotoluene	µg/L		0.2 U	0.4 U	2 U	4 U
4-Chlorotoluene	µg/L		0.2 U	0.4 U	2 U	4 U
Bromobenzene	µg/L		0.2 U	0.4 U	2 U	4 U
Bromochloromethane	µg/L		0.2 U	0.4 U	2 U	4 U
Bromodichloromethane	µg/L		0.2 U	0.4 U	2 U	4 U
Bromoform	µg/L		1 U	2 U	10 U	20 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIa-Geotech Well	INJ-2	INJ-2	INJ-2	INJ-2
	Sample ID	**EAIa-Geotech Wel**	**HWA-INJ-2-020215**	**INJ-2-032015**	**INJ-2-072015**	**INJ-2-012016**
	Depth	15-20 ft	8-23 ft	8-23 ft	8-23 ft	8-23 ft
	Date	5/17/2016	2/2/2015	3/24/2015	7/17/2015	1/28/2016
VOCs						
Bromomethane	µg/L		0.31 U	0.4 U	2 U	5.4 U
Carbon tetrachloride	µg/L		0.2 U	0.4 U	2 U	4 U
Chlorobenzene	µg/L		0.2 U	0.4 U	2 U	4 U
Chloroethane	µg/L		1 U	2 U	10 U	20 U
Chloroform	µg/L		0.34	0.4 U	2 U	4 U
Chloromethane	µg/L		1 U	2 U	10 U	20 U
cis-1,3-Dichloropropene	µg/L		0.2 U	0.4 U	2 U	4 U
Dibromochloromethane	µg/L		0.2 U	0.4 U	2 U	4 U
Dibromomethane	µg/L		0.2 U	0.4 U	2 U	4 U
Dichlorodifluoromethane	µg/L		0.2 U	0.4 U	2 U	4 U
Hexachlorobutadiene	µg/L		0.2 U	0.4 U	2 U	4 U
Iodomethane	µg/L		1.5 U	2 U	10 U	28 U
Methylene chloride	µg/L		1 U	2 U	10 U	20 U
trans-1,3-Dichloropropene	µg/L		0.2 U	0.4 U	2 U	4 U
Trichlorofluoromethane	µg/L		0.2 U	0.4 U	2 U	4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIb-B10	EAIb-B11	EAIb-B12	EAIb-B13	EAIb-B14
	Sample ID	**EAIb-B10-water**	**EAIb-B11-water**	**EAIb-B12-water**	**EAIb-B13-water**	**EAIb-B14-water**
	Depth	13-18 ft	15-20 ft	13-18 ft	13-18 ft	13-18 ft
	Date	5/11/2016	5/11/2016	5/11/2016	5/11/2016	5/11/2016
BTEX						
Benzene	µg/L			1 U		
Ethylbenzene	µg/L			1 U		
Toluene	µg/L			1 U		
Xylene (total)	µg/L			3 U		
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L			50 U		
Gasoline Range Organics	µg/L			100 U		
Oil Range Organics	µg/L			250 U		
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIb-B15	EAIb-B16	EAIb-B17	EAIb-B18	EAIb-B19
	Sample ID	**EAIb-B15-water**	**EAIb-B16-water**	**EAIb-B17-water**	**EAIb-B18-water**	**EAIb-B19-water**
	Depth	15-20 ft	15-20 ft	15-20 ft	13-18 ft	13-18 ft
	Date	5/11/2016	5/12/2016	5/12/2016	5/12/2016	5/12/2016
BTEX						
Benzene	µg/L					1 U
Ethylbenzene	µg/L					1 U
Toluene	µg/L					1 U
Xylene (total)	µg/L					3 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L					50 U
Gasoline Range Organics	µg/L					100 U
Oil Range Organics	µg/L					250 U
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIb-B20	EAIb-B21	EAIb-B22	EPI-B-1	EPI-B-1
	Sample ID	**EAIb-B20-water**	**EAIb-B21-water**	**EAIb-B22-water**	**EPI-B-1:9**	**EPI-B-1:26**
	Depth	15-20 ft	15-20 ft	15-20 ft	8-12 ft	26-30 ft
	Date	5/12/2016	5/12/2016	5/12/2016	7/22/2004	7/22/2004
Conventionals						
Nitrate	µg/L				9000	
Sulfate	µg/L				12000	
Total Organic Carbon	µg/L				4300	
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	31	2 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	6400	5
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	2 U	2 U
Trichloroethene	µg/L	1 U	1 U	1 U	110	2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	2 U	2 U
Dissolved Metals						
Iron	µg/L				330	
Manganese	µg/L				49	
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L				2 U	2 U
1,1,2-Trichloroethane	µg/L				2 U	2 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	2 U	2 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U	2 U	2 U
1,1-Dichloropropene	µg/L				2 U	2 U
1,2,3-Trichlorobenzene	µg/L				2 U	2 U
1,2,3-Trichloropropane	µg/L				2 U	2 U
1,2,4-Trichlorobenzene	µg/L				2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L				10 U	10 U
1,2-Dibromoethane	µg/L				2 U	2 U
1,2-Dichlorobenzene	µg/L				2 U	2 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U	2 U	2 U
1,2-Dichloropropane	µg/L				2 U	2 U
1,3-Dichlorobenzene	µg/L				2 U	2 U
1,3-Dichloropropane	µg/L				2 U	2 U
1,4-Dichlorobenzene	µg/L				2 U	2 U
2,2-Dichloropropane	µg/L				2 U	2 U
2-Chlorotoluene	µg/L				2 U	2 U
4-Chlorotoluene	µg/L				2 U	2 U
Bromobenzene	µg/L				2 U	2 U
Bromochloromethane	µg/L				2 U	2 U
Bromodichloromethane	µg/L				2 U	2 U
Bromoform	µg/L				2 U	2 U
Bromomethane	µg/L				2 U	2 U
Carbon tetrachloride	µg/L				2 U	2 U
Chlorobenzene	µg/L				2 U	2 U
Chloroethane	µg/L	1 U	1 U	1 U	2 U	2 U
Chloroform	µg/L				2 U	2 U
Chloromethane	µg/L				2 U	2 U
cis-1,3-Dichloropropene	µg/L				2 U	2 U
Dibromochloromethane	µg/L				2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIb-B20	EAIb-B21	EAIb-B22	EPI-B-1	EPI-B-1
	Sample ID	**EAIb-B20-water**	**EAIb-B21-water**	**EAIb-B22-water**	**EPI-B-1:9**	**EPI-B-1:26**
	Depth	15-20 ft	15-20 ft	15-20 ft	8-12 ft	26-30 ft
	Date	5/12/2016	5/12/2016	5/12/2016	7/22/2004	7/22/2004
VOCs						
Dibromomethane	µg/L				2 U	2 U
Dichlorodifluoromethane	µg/L				2 U	2 U
Hexachlorobutadiene	µg/L				2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L				2 U	2 U
Trichlorofluoromethane	µg/L				2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EAIb-B5	EAIb-B6	EAIb-B7	EAIb-B8	EAIb-B9
	Sample ID	**EAIb-B5-water**	**EAIb-B6-water**	**EAIb-B7-water**	**EAIb-B8-water**	**EAIb-B9-water**
	Depth	13-18 ft	13-18 ft	15-20 ft	13-18 ft	13-18 ft
	Date	5/10/2016	5/10/2016	5/10/2016	5/10/2016	5/11/2016
BTEX						
Benzene	µg/L				1 U	
Ethylbenzene	µg/L				1 U	
Toluene	µg/L				1 U	
Xylene (total)	µg/L				3 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L				50 U	
Gasoline Range Organics	µg/L				100 U	
Oil Range Organics	µg/L				250 U	
VOCs						
1,1,1-Trichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-1	EPI-B-2	EPI-B-2	EPI-B-2	EPI-B-3
	Sample ID	**EPI-B-1:40**	**EPI-B-2:22**	**EPI-B-2:36**	**EPI-B-2:9**	**EPI-B-3:36**
	Depth	40-44 ft	22-26 ft	36-40 ft	8-12 ft	36-40 ft
	Date	7/22/2004	7/26/2004	7/26/2004	7/26/2004	7/26/2004
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	µg/L	5	2 U	2 U	14	2 U
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	8	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	2 U	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

Location	EPI-B-1	EPI-B-2	EPI-B-2	EPI-B-2	EPI-B-3
Sample ID	**EPI-B-1:40**	**EPI-B-2:22**	**EPI-B-2:36**	**EPI-B-2:9**	**EPI-B-3:36**
Depth	40-44 ft	22-26 ft	36-40 ft	8-12 ft	36-40 ft
Date	7/22/2004	7/26/2004	7/26/2004	7/26/2004	7/26/2004

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-10	EPI-B-11	EPI-B-12	EPI-B-13	EPI-B-14
	Sample ID	**EPI-B-10**	**EPI-B-11**	**EPI-B-12**	**EPI-B-13**	**EPI-B-14**
	Depth	20-24 ft	20-24 ft	20-24 ft	10-14 ft	10-14 ft
	Date	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	µg/L	23	18	8	18	16
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	3	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

Location	EPI-B-10	EPI-B-11	EPI-B-12	EPI-B-13	EPI-B-14
Sample ID	**EPI-B-10**	**EPI-B-11**	**EPI-B-12**	**EPI-B-13**	**EPI-B-14**
Depth	20-24 ft	20-24 ft	20-24 ft	10-14 ft	10-14 ft
Date	10/25/2004	10/25/2004	10/25/2004	10/25/2004	10/25/2004

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-16	ESD-B1	ESD-B2	ESS-B1	ESS-B2
	Sample ID	**EPI-B-16**	**ESD-B1-W**	**ESD-B2-W**	**ESS-B1-W**	**ESS-B2-W**
	Depth	10-14 ft	6-8 ft	7-12 ft	8-8 ft	8-9 ft
	Date	10/26/2004	12/15/2011	12/15/2011	12/15/2011	12/15/2011
BTEX						
Benzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Toluene	µg/L		1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L		0.4 U	0.4 U	0.4 U	0.4 U
Xylene (ortho)	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Xylene (total)	µg/L		0.4 U	0.4 U	0.4 U	0.4 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	0.48	0.2 U	0.28	0.22
Tetrachloroethene	µg/L	30	26	26	13	32
trans-1,2-Dichloroethene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	2 U	1	0.45	0.58	0.25
Vinyl chloride	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
SVOCs						
Naphthalene	µg/L		1 U	1 U	1 U	1 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L		1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U	5 U	5 U	5 U
Bromobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	2 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-16	ESD-B1	ESD-B2	ESS-B1	ESS-B2
	Sample ID	**EPI-B-16**	**ESD-B1-W**	**ESD-B2-W**	**ESS-B1-W**	**ESS-B2-W**
	Depth	10-14 ft	6-8 ft	7-12 ft	8-8 ft	8-9 ft
	Date	10/26/2004	12/15/2011	12/15/2011	12/15/2011	12/15/2011
VOCs						
Bromomethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	2 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	2 U	0.45	0.52	0.2 U	0.61
Chloromethane	µg/L	2 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L		1 U	1 U	1 U	1 U
iso-Propylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Methyl ethyl ketone	µg/L		5 U	5 U	5 U	5 U
Methyl iso butyl ketone	µg/L		2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
n-Butylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
Styrene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene	µg/L		0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-3	EPI-B-3	EPI-B-4	EPI-B-4	EPI-B-4
	Sample ID	**EPI-B-3:9**	**EPI-B-3:22**	**EPI-B-4:36**	**EPI-B-4:9**	**EPI-B-4:22**
	Depth	8-12 ft	22-26 ft	36-40 ft	8-12 ft	22-26 ft
	Date	7/26/2004	7/26/2004	7/23/2004	7/23/2004	7/23/2004
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	160	2 U
Tetrachloroethene	µg/L	410	2 U	2 U	1900	2 U
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	210	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	2 U	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

Location	EPI-B-3	EPI-B-3	EPI-B-4	EPI-B-4	EPI-B-4
Sample ID	**EPI-B-3:9**	**EPI-B-3:22**	**EPI-B-4:36**	**EPI-B-4:9**	**EPI-B-4:22**
Depth	8-12 ft	22-26 ft	36-40 ft	8-12 ft	22-26 ft
Date	7/26/2004	7/26/2004	7/23/2004	7/23/2004	7/23/2004

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-5	EPI-B-5	EPI-B-5	EPI-B-6	EPI-B-6
	Sample ID	**EPI-B-5:22**	**EPI-B-5:36**	**EPI-B-5:9**	**EPI-B-6:9**	**EPI-B-6:22**
	Depth	22-26 ft	36-40 ft	8-12 ft	8-12 ft	22-26 ft
	Date	7/26/2004	7/26/2004	7/26/2004	7/22/2004	7/22/2004
Conventionals						
Nitrate	µg/L				14000	
Sulfate	µg/L				13000	
Total Organic Carbon	µg/L				1700	
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	µg/L	2 U	2 U	4	9	2 U
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
Dissolved Metals						
Iron	µg/L				30	
Manganese	µg/L				81	
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	2 U	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-5	EPI-B-5	EPI-B-5	EPI-B-6	EPI-B-6
	Sample ID	**EPI-B-5:22**	**EPI-B-5:36**	**EPI-B-5:9**	**EPI-B-6:9**	**EPI-B-6:22**
	Depth	22-26 ft	36-40 ft	8-12 ft	8-12 ft	22-26 ft
	Date	7/26/2004	7/26/2004	7/26/2004	7/22/2004	7/22/2004
VOCs						
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-6	EPI-B-7	EPI-B-7	EPI-B-7	EPI-B-8
	Sample ID	**EPI-B-6:36**	**EPI-B-7:9**	**EPI-B-7:36**	**EPI-B-7:22**	**EPI-B-8:22**
	Depth	36-40 ft	8-12 ft	36-40 ft	22-26 ft	22-26 ft
	Date	7/22/2004	7/23/2004	7/23/2004	7/23/2004	7/23/2004
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	µg/L	2 U	4	2 U	2 U	2 U
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	2 U	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

Location	EPI-B-6	EPI-B-7	EPI-B-7	EPI-B-7	EPI-B-8
Sample ID	**EPI-B-6:36**	**EPI-B-7:9**	**EPI-B-7:36**	**EPI-B-7:22**	**EPI-B-8:22**
Depth	36-40 ft	8-12 ft	36-40 ft	22-26 ft	22-26 ft
Date	7/22/2004	7/23/2004	7/23/2004	7/23/2004	7/23/2004

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-8	EPI-B-8	EPI-B-9	EPI-B-9	EPI-B-9
	Sample ID	**EPI-B-8:32**	**EPI-B-8:9**	**EPI-B-9:22**	**EPI-B-9:36**	**EPI-B-9:9**
	Depth	32-36 ft	8-12 ft	22-26 ft	36-40 ft	8-12 ft
	Date	7/23/2004	7/23/2004	7/23/2004	7/23/2004	7/23/2004
Conventionals						
Nitrate	µg/L					11000
Sulfate	µg/L					10000
Total Organic Carbon	µg/L					5200
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	µg/L	2 U	5	2 U	2 U	3
trans-1,2-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	µg/L	2 U	2 U	2 U	2 U	2 U
Dissolved Metals						
Iron	µg/L					40
Manganese	µg/L					39
VOCs						
1,1,1-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	µg/L	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	µg/L	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Bromoform	µg/L	2 U	2 U	2 U	2 U	2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	µg/L	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroethane	µg/L	2 U	2 U	2 U	2 U	2 U
Chloroform	µg/L	2 U	2 U	2 U	2 U	2 U
Chloromethane	µg/L	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	EPI-B-8	EPI-B-8	EPI-B-9	EPI-B-9	EPI-B-9
	Sample ID	**EPI-B-8:32**	**EPI-B-8:9**	**EPI-B-9:22**	**EPI-B-9:36**	**EPI-B-9:9**
	Depth	32-36 ft	8-12 ft	22-26 ft	36-40 ft	8-12 ft
	Date	7/23/2004	7/23/2004	7/23/2004	7/23/2004	7/23/2004
VOCs						
Dibromomethane	µg/L	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	µg/L	2 U	2 U	2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	FB-9	FB-9	FB-9	F-SB-1	F-SB-2
	Sample ID	**3-9-GW-22.0-0622**	**3-9-GW-27.0-0622**	**3-9-GW-32.0-0622**	**F-SB-1**	**F-SB-2**
	Depth	22-22 ft	27-27 ft	32-32 ft	4-5 ft	4-5 ft
	Date	6/22/2016	6/22/2016	6/22/2016	7/19/2001	7/19/2001
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.86	8.7	5.8	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		
1,2,3-Trichlorobenzene	µg/L	1.4 U	1.4 U	1.4 U		
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U		
1,2,4-Trichlorobenzene	µg/L	0.26 U	0.26 U	0.26 U		
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U		
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U		
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U		
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U		
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U		
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U		
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U		
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U		
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U		
Bromoform	µg/L	1 U	1 U	1 U		
Bromomethane	µg/L	0.26 U	0.26 U	0.26 U		
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U		
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		
Chloroethane	µg/L	1 U	1 U	1 U		
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.7	0.24
Chloromethane	µg/L	1 U	1 U	1 U		
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U		
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U		
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.22	0.2 U
Hexachlorobutadiene	µg/L	0.25 U	0.25 U	0.25 U		
Iodomethane	µg/L	1.5 U	1.5 U	1.5 U		
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	FB-9	FB-9	FB-9	F-SB-1	F-SB-2
	Sample ID	**B-9-GW-22.0-0622**	**B-9-GW-27.0-0622**	**B-9-GW-32.0-0622**	**F-SB-1**	**F-SB-2**
	Depth	22-22 ft	27-27 ft	32-32 ft	4-5 ft	4-5 ft
	Date	6/22/2016	6/22/2016	6/22/2016	7/19/2001	7/19/2001
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	F-SB-3	F-SB-4	GM-1	GM-2	GM-3
	Sample ID	**F-SB-3**	**F-SB-4**	**GM-1-W**	**GM-2-W**	**GM-3-W**
	Depth	4-5 ft	4-5 ft	8-11 ft	10-12 ft	6-9 ft
	Date	7/19/2001	7/19/2001	5/19/2009	5/19/2009	5/19/2009
BTEX						
Benzene	µg/L			0.2 U	1 U	0.2 U
Ethylbenzene	µg/L			0.2 U	1 U	0.2 U
Toluene	µg/L			1 U	1 U	1 U
Xylene (meta & para)	µg/L			0.4 U	1 U	0.4 U
Xylene (ortho)	µg/L			0.2 U	1 U	0.2 U
Xylene (total)	µg/L			0.4 U	1 U	0.4 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		7
Tetrachloroethene	µg/L	0.37	6.1	0.2 U		0.9
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U		1.1
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U		1
SVOCs						
Naphthalene	µg/L			1 U		1 U
Total Metals						
Arsenic	µg/L				3.3 U	
Barium	µg/L				28 U	
Cadmium	µg/L				4.4 U	
Chromium	µg/L				11 U	
Lead	µg/L				1.1 U	
Mercury	µg/L				0.5 U	
Selenium	µg/L				5.6 U	
Silver	µg/L				11 U	
TPHs						
Diesel Range Organics	µg/L			260 U	250 U	250 U
Gasoline Range Organics	µg/L			100 U	100 U	100 U
Oil Range Organics	µg/L			420 U	400 U	400 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L			0.2 U		0.2 U
1,1,1-Trichloroethane	µg/L			0.2 U		0.2 U
1,1,2,2-Tetrachloroethane	µg/L			0.2 U		0.2 U
1,1,2-Trichloroethane	µg/L			0.2 U		0.2 U
1,1-Dichloroethane	µg/L			0.2 U		0.2 U
1,1-Dichloroethene	µg/L			0.2 U		0.2 U
1,1-Dichloropropene	µg/L			0.2 U		0.2 U
1,2,3-Trichlorobenzene	µg/L			0.2 U		0.2 U
1,2,3-Trichloropropane	µg/L			0.2 U		0.2 U
1,2,4-Trichlorobenzene	µg/L			0.2 U		0.2 U
1,2,4-Trimethylbenzene	µg/L			0.2 U		0.2 U
1,2-Dibromo-3-chloropropane	µg/L			1 U		1 U
1,2-Dibromoethane	µg/L			0.2 U		0.2 U
1,2-Dichlorobenzene	µg/L			0.2 U		0.2 U
1,2-Dichloroethane	µg/L			0.2 U		0.2 U
1,2-Dichloropropane	µg/L			0.2 U		0.2 U
1,3,5-Trimethylbenzene	µg/L			0.2 U		0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	F-SB-3	F-SB-4	GM-1	GM-2	GM-3
	Sample ID	**F-SB-3**	**F-SB-4**	**GM-1-W**	**GM-2-W**	**GM-3-W**
	Depth	4-5 ft	4-5 ft	8-11 ft	10-12 ft	6-9 ft
	Date	7/19/2001	7/19/2001	5/19/2009	5/19/2009	5/19/2009
VOCs						
1,3-Dichlorobenzene	µg/L			0.2 U		0.2 U
1,3-Dichloropropane	µg/L			0.2 U		0.2 U
1,4-Dichlorobenzene	µg/L			0.2 U		0.2 U
2,2-Dichloropropane	µg/L			0.2 U		0.2 U
2-Chloroethyl vinyl ether	µg/L			1 U		1 U
2-Chlorotoluene	µg/L			0.2 U		0.2 U
2-Hexanone	µg/L			2 U		2 U
4-Chlorotoluene	µg/L			0.2 U		0.2 U
Acetone	µg/L			5 U		5 U
Bromobenzene	µg/L			0.2 U		0.2 U
Bromochloromethane	µg/L			0.2 U		0.2 U
Bromodichloromethane	µg/L			0.2 U		0.2 U
Bromoform	µg/L			1 U		1 U
Bromomethane	µg/L			0.2 U		0.2 U
Carbon disulfide	µg/L			0.2 U		0.2 U
Carbon tetrachloride	µg/L			0.2 U		0.2 U
Chlorobenzene	µg/L			0.2 U		0.2 U
Chloroethane	µg/L			1 U		1 U
Chloroform	µg/L	0.2 U	0.39	0.2 U		0.2 U
Chloromethane	µg/L			1 U		1 U
cis-1,3-Dichloropropene	µg/L			0.2 U		0.2 U
Cymene	µg/L			0.2 U		0.2 U
Dibromochloromethane	µg/L			0.2 U		0.2 U
Dibromomethane	µg/L			0.2 U		0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2	0.2 U		0.2 U
Hexachlorobutadiene	µg/L			0.2 U		0.2 U
Iodomethane	µg/L			1 U		1 U
iso-Propylbenzene	µg/L			0.2 U		0.2 U
Methyl ethyl ketone	µg/L			5 U		5 U
Methyl iso butyl ketone	µg/L			2 U		2 U
Methylene chloride	µg/L	1 U	1 U	1 U		1 U
Methyl-Tert-Butyl Ether	µg/L			0.2 U		0.2 U
n-Butylbenzene	µg/L			0.2 U		0.2 U
n-Propylbenzene	µg/L			0.2 U		0.2 U
sec-Butylbenzene	µg/L			0.2 U		0.2 U
Styrene	µg/L			0.2 U		0.2 U
tert-Butylbenzene	µg/L			0.2 U		0.2 U
trans-1,3-Dichloropropene	µg/L			0.2 U		0.2 U
Trichlorofluoromethane	µg/L			0.2 U		0.2 U
Vinyl acetate	µg/L			2 U		2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	GM-4	GM-5	GM-6	HWA-BH-2	HWA-BH-6
	Sample ID	**GM-4-W**	**GM-5-W**	**GM-6-W**	**HWA-BH-2-W**	**HWA-BH-6-W**
	Depth	6-9 ft	8-11 ft	9-12 ft	6.5-16 ft	7-20 ft
	Date	5/19/2009	5/19/2009	5/19/2009	7/9/2007	7/10/2007
BTEX						
Benzene	µg/L	1 U	0.2 U	0.2 U	2 U	1 U
Ethylbenzene	µg/L	1 U	0.2 U	0.2 U	2 U	1 U
Toluene	µg/L	1 U	1 U	1 U	2 U	1 U
Xylene (meta & para)	µg/L	1 U	0.4 U	0.4 U	4 U	
Xylene (ortho)	µg/L	1 U	0.2 U	0.2 U	2 U	
Xylene (total)	µg/L	1 U	0.4 U	0.4 U	4 U	3 U
cVOCs						
cis-1,2-Dichloroethene	µg/L		0.2 U	0.38	2 U	2 U
Tetrachloroethene	µg/L		0.2 U	0.2 U	2 U	2 U
trans-1,2-Dichloroethene	µg/L		0.2 U	0.2 U	2 U	2 U
Trichloroethene	µg/L		0.25	0.2 U	2 U	2 U
Vinyl chloride	µg/L		0.2 U	0.28	0.2 U	0.2 U
SVOCs						
Acrylonitrile	µg/L				10 U	
Naphthalene	µg/L		1 U	1 U	2 U	
Total Metals						
Arsenic	µg/L	3.3 U	3.3 U	3.3 U		
Barium	µg/L	28 U	40	28 U		
Cadmium	µg/L	4.4 U	4.4 U	4.4 U		
Chromium	µg/L	11 U	11 U	11 U		
Lead	µg/L	1.1 U	1.1 U	1.1 U		
Mercury	µg/L	0.5 U	0.5 U	0.5 U		
Selenium	µg/L	5.6 U	5.6 U	5.6 U		
Silver	µg/L	11 U	11 U	11 U		
TPHs						
Diesel Range Organics	µg/L	260 U	260 U	250 U	130 U	130 U
Gasoline Range Organics	µg/L	100 U	100 U	400 U	50 U	50 U
Oil Range Organics	µg/L	420 U	410 U	400 U	250 U	250 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,1,1-Trichloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,1,2-Trichloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,1-Dichloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,1-Dichloroethene	µg/L		0.2 U	0.2 U	2 U	2 U
1,1-Dichloropropene	µg/L		0.2 U	0.2 U	2 U	2 U
1,2,3-Trichlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L		0.2 U	0.2 U	2 U	2 U
1,2,4-Trichlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U	0.2 U	2 U	
1,2-Dibromo-3-chloropropane	µg/L		1 U	1 U	10 U	10 U
1,2-Dibromoethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,2-Dichlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
1,2-Dichloroethane	µg/L		0.2 U	0.2 U	2 U	2 U
1,2-Dichloropropane	µg/L		0.2 U	0.2 U	2 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	GM-4	GM-5	GM-6	HWA-BH-2	HWA-BH-6
	Sample ID	**GM-4-W**	**GM-5-W**	**GM-6-W**	**HWA-BH-2-W**	**HWA-BH-6-W**
	Depth	6-9 ft	8-11 ft	9-12 ft	6.5-16 ft	7-20 ft
	Date	5/19/2009	5/19/2009	5/19/2009	7/9/2007	7/10/2007
VOCs						
1,3,5-Trimethylbenzene	µg/L		0.2 U	0.2 U	2 U	
1,3-Dichlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
1,3-Dichloropropane	µg/L		0.2 U	0.2 U	2 U	2 U
1,4-Dichlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
2,2-Dichloropropane	µg/L		0.2 U	0.2 U	2 U	2 U
2-Chloroethyl vinyl ether	µg/L		1 U	1 U		
2-Chlorotoluene	µg/L		0.2 U	0.2 U	2 U	2 U
2-Hexanone	µg/L		2 U	2 U	10 U	
4-Chlorotoluene	µg/L		0.2 U	0.2 U	2 U	2 U
Acetone	µg/L		5 U	5 U	25 U	
Bromobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
Bromochloromethane	µg/L		0.2 U	0.2 U	2 U	2 U
Bromodichloromethane	µg/L		0.2 U	0.2 U	2 U	2 U
Bromoform	µg/L		1 U	1 U	2 U	2 U
Bromomethane	µg/L		0.2 U	0.2 U	2 U	2 U
Carbon disulfide	µg/L		0.2 U	0.2 U		
Carbon tetrachloride	µg/L		0.2 U	0.2 U	2 U	2 U
Chlorobenzene	µg/L		0.2 U	0.2 U	2 U	2 U
Chloroethane	µg/L		1 U	1 U	2 U	2 U
Chloroform	µg/L		0.2 U	0.2 U	2 U	2 U
Chloromethane	µg/L		1 U	1 U	2 U	2 U
cis-1,3-Dichloropropene	µg/L		0.2 U	0.2 U	2 U	2 U
Cymene	µg/L		0.2 U	0.2 U	2 U	
Dibromochloromethane	µg/L		0.2 U	0.2 U	2 U	2 U
Dibromomethane	µg/L		0.2 U	0.2 U	2 U	2 U
Dichlorodifluoromethane	µg/L		0.2 U	0.2 U	2 U	2 U
Hexachlorobutadiene	µg/L		0.2 U	0.2 U	2 U	2 U
Iodomethane	µg/L		1 U	1 U		
iso-Propylbenzene	µg/L		0.2 U	0.2 U	2 U	
Methyl ethyl ketone	µg/L		5 U	5 U	10 U	
Methyl iso butyl ketone	µg/L		2 U	2 U	10 U	
Methylene chloride	µg/L		1 U	1 U	5 U	5 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U	0.2 U	2 U	
n-Butylbenzene	µg/L		0.2 U	0.2 U	2 U	
n-Propylbenzene	µg/L		0.2 U	0.2 U	2 U	
sec-Butylbenzene	µg/L		0.2 U	0.2 U	2 U	
Styrene	µg/L		0.2 U	0.2 U	2 U	
tert-Butylbenzene	µg/L		0.2 U	0.2 U	2 U	
trans-1,3-Dichloropropene	µg/L		0.2 U	0.2 U	2 U	2 U
Trichlorofluoromethane	µg/L		0.2 U	0.2 U	2 U	2 U
Vinyl acetate	µg/L		2 U	2 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-BH-20	HWA-BH-21	HWA-CH-B1	HWA-CH-B2	HWA-CH-B3
	Sample ID	**HWA-BH-20-W**	**HWA-BH-21-W**	**HWA-CH-B1-W**	**HWA-CH-B2-W**	**HWA-CH-B3-W**
	Depth	6-16 ft	7-16 ft	7.5-12 ft	11-12 ft	16-17 ft
	Date	8/9/2007	8/9/2007	9/30/2011	9/30/2011	9/30/2011
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.83	1.8	0.84	0.2 U	0.2 U
Tetrachloroethene	µg/L	74	5.8	46	31	3.6
trans-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	3.2	7.4	3.1	1	0.2 U
Vinyl chloride	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
TPHs						
Diesel Range Organics	µg/L	280 U	260 U			
Gasoline Range Organics	µg/L	100 U	100 U			
Oil Range Organics	µg/L	450 U	410 U			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	2 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	2 U	1 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	2 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.4 U	0.2 U	0.2 U	0.75	0.2 U
Chloromethane	µg/L	0.4 U	0.2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-BH-20	HWA-BH-21	HWA-CH-B1	HWA-CH-B2	HWA-CH-B3
	Sample ID	**HWA-BH-20-W**	**HWA-BH-21-W**	**HWA-CH-B1-W**	**HWA-CH-B2-W**	**HWA-CH-B3-W**
	Depth	6-16 ft	7-16 ft	7.5-12 ft	11-12 ft	16-17 ft
	Date	8/9/2007	8/9/2007	9/30/2011	9/30/2011	9/30/2011
VOCs						
Dichlorodifluoromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	2 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	2 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-BH-8	HWA-BH-9	HWA-BH-11	HWA-BH-17	HWA-BH-19
	Sample ID	**HWA-BH-8-W**	**HWA-BH-9-W**	**HWA-BH-11-W**	**HWA-BH-17-W**	**HWA-BH-19-W**
	Depth	8-16 ft	7.5-16 ft	4-16 ft	7-16 ft	10-16 ft
	Date	7/10/2007	7/10/2007	7/9/2007	8/9/2007	8/9/2007
BTEX						
Benzene	µg/L	1 U	1 U	1 U		
Ethylbenzene	µg/L	1 U	1 U	1 U		
Toluene	µg/L	1 U	1 U	1 U		
Xylene (total)	µg/L	3 U	3 U	3 U		
cVOCs						
cis-1,2-Dichloroethene	µg/L	2 U	2 U		0.2 U	0.2 U
Tetrachloroethene	µg/L	2 U	2 U		0.2 U	2.5
trans-1,2-Dichloroethene	µg/L	2 U	2 U		0.2 U	0.2 U
Trichloroethene	µg/L	2 U	2 U		0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U		0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L			4		
Barium	µg/L			240		
Cadmium	µg/L			5 U		
Chromium	µg/L			7 U		
Lead	µg/L			3 U		
Mercury	µg/L			0.2 U		
Selenium	µg/L			40 U		
Silver	µg/L			30 U		
Total Metals						
Arsenic	µg/L			49		
Barium	µg/L			1200		
Cadmium	µg/L			6		
Chromium	µg/L			260		
Lead	µg/L			95		
Mercury	µg/L			0.41		
Selenium	µg/L			40 U		
Silver	µg/L			30 U		
TPHs						
Diesel Range Organics	µg/L	130 U	130 U	150		270 U
Gasoline Range Organics	µg/L	50 U	50 U	50 U	100 U	100 U
Oil Range Organics	µg/L	250 U	250 U	250 U		440 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	2 U	2 U		0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	2 U	2 U		0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	2 U		0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	2 U	2 U		0.2 U	0.2 U
1,1-Dichloroethane	µg/L	2 U	2 U		0.2 U	0.2 U
1,1-Dichloroethene	µg/L	2 U	2 U		0.2 U	0.2 U
1,1-Dichloropropene	µg/L	2 U	2 U		0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	2 U	2 U		0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	10 U		1 U	1 U
1,2-Dibromoethane	µg/L	2 U	2 U		0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-BH-8	HWA-BH-9	HWA-BH-11	HWA-BH-17	HWA-BH-19
	Sample ID	**HWA-BH-8-W**	**HWA-BH-9-W**	**HWA-BH-11-W**	**HWA-BH-17-W**	**HWA-BH-19-W**
	Depth	8-16 ft	7.5-16 ft	4-16 ft	7-16 ft	10-16 ft
	Date	7/10/2007	7/10/2007	7/9/2007	8/9/2007	8/9/2007
VOCs						
1,2-Dichlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
1,2-Dichloroethane	µg/L	2 U	2 U		0.51	0.2 U
1,2-Dichloropropane	µg/L	2 U	2 U		0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
1,3-Dichloropropane	µg/L	2 U	2 U		0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
2,2-Dichloropropane	µg/L	2 U	2 U		0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L				1 U	1 U
2-Chlorotoluene	µg/L	2 U	2 U		0.2 U	0.2 U
4-Chlorotoluene	µg/L	2 U	2 U		0.2 U	0.2 U
Bromobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
Bromochloromethane	µg/L	2 U	2 U		0.2 U	0.2 U
Bromodichloromethane	µg/L	2 U	2 U		0.2 U	0.2 U
Bromoform	µg/L	2 U	2 U		1 U	1 U
Bromomethane	µg/L	2 U	2 U		1 U	1 U
Carbon tetrachloride	µg/L	2 U	2 U		0.2 U	0.2 U
Chlorobenzene	µg/L	2 U	2 U		0.2 U	0.2 U
Chloroethane	µg/L	2 U	2 U		1 U	1 U
Chloroform	µg/L	2 U	2 U		0.2 U	0.2 U
Chloromethane	µg/L	2 U	2 U		0.2 U	0.2 U
cis-1,3-Dichloropropene	µg/L	2 U	2 U		0.2 U	0.2 U
Dibromochloromethane	µg/L	2 U	2 U		0.2 U	0.2 U
Dibromomethane	µg/L	2 U	2 U		0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	2 U	2 U		0.2 U	0.2 U
Hexachlorobutadiene	µg/L	2 U	2 U		0.2 U	0.2 U
Iodomethane	µg/L				1 U	1 U
Methylene chloride	µg/L	5 U	5 U		1 U	1 U
trans-1,3-Dichloropropene	µg/L	2 U	2 U		0.2 U	0.2 U
Trichlorofluoromethane	µg/L	2 U	2 U		0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-CH-B13	Lot5-1	Lot5-2	Lot5-3	Lot5-4
	Sample ID	**HWA-CH-B13-W**	**Lot5-1-W**	**Lot5-2-W**	**Lot5-3-W**	**Lot5-4-W**
	Depth	20-24 ft	10-22 ft	10-22 ft	None	None
	Date	9/30/2011	8/3/2015	8/3/2015	8/3/2015	8/3/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U				
Tetrachloroethene	µg/L	0.2 U	1.6	0.63	11	9.8
trans-1,2-Dichloroethene	µg/L	0.2 U				
Trichloroethene	µg/L	0.2 U				
Vinyl chloride	µg/L	0.2 U				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U				
1,1,1-Trichloroethane	µg/L	0.2 U				
1,1,2,2-Tetrachloroethane	µg/L	0.2 U				
1,1,2-Trichloroethane	µg/L	0.2 U				
1,1-Dichloroethane	µg/L	0.2 U				
1,1-Dichloroethene	µg/L	0.2 U				
1,1-Dichloropropene	µg/L	0.2 U				
1,2,3-Trichlorobenzene	µg/L	0.2 U				
1,2,3-Trichloropropane	µg/L	0.2 U				
1,2,4-Trichlorobenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U				
1,2-Dibromoethane	µg/L	0.2 U				
1,2-Dichlorobenzene	µg/L	0.2 U				
1,2-Dichloroethane	µg/L	0.2 U				
1,2-Dichloropropane	µg/L	0.2 U				
1,3-Dichlorobenzene	µg/L	0.2 U				
1,3-Dichloropropane	µg/L	0.2 U				
1,4-Dichlorobenzene	µg/L	0.2 U				
2,2-Dichloropropane	µg/L	0.2 U				
2-Chloroethyl vinyl ether	µg/L	1 U				
2-Chlorotoluene	µg/L	0.2 U				
4-Chlorotoluene	µg/L	0.2 U				
Bromobenzene	µg/L	0.2 U				
Bromochloromethane	µg/L	0.2 U				
Bromodichloromethane	µg/L	0.2 U				
Bromoform	µg/L	1 U				
Bromomethane	µg/L	0.2 U				
Carbon tetrachloride	µg/L	0.2 U				
Chlorobenzene	µg/L	0.2 U				
Chloroethane	µg/L	1 U				
Chloroform	µg/L	0.2 U				
Chloromethane	µg/L	1 U				
cis-1,3-Dichloropropene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U				
Dibromomethane	µg/L	0.2 U				
Dichlorodifluoromethane	µg/L	0.2 U				
Hexachlorobutadiene	µg/L	0.2 U				
Iodomethane	µg/L	1 U				
Methylene chloride	µg/L	1 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-CH-B13	Lot5-1	Lot5-2	Lot5-3	Lot5-4
	Sample ID	**HWA-CH-B13-W**	**Lot5-1-W**	**Lot5-2-W**	**Lot5-3-W**	**Lot5-4-W**
	Depth	20-24 ft	10-22 ft	10-22 ft	None	None
	Date	9/30/2011	8/3/2015	8/3/2015	8/3/2015	8/3/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U				
Trichlorofluoromethane	µg/L	0.2 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-CH-B4	HWA-CH-B8	HWA-CH-B9	HWA-CH-B11	HWA-CH-B12
	Sample ID	**HWA-CH-B4-W**	**HWA-CH-B8-W**	**HWA-CH-B9-W**	**HWA-CH-B11-W**	**HWA-CH-B12-W**
	Depth	17-20 ft	8.5-11 ft	7.5-8 ft	8-12 ft	20-23.5 ft
	Date	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011
BTEX						
Benzene	µg/L		0.2 U	0.2 U		
Ethylbenzene	µg/L		0.2 U	0.2 U		
Toluene	µg/L		1 U	1 U		
Xylene (meta & para)	µg/L		0.4 U	0.4 U		
Xylene (ortho)	µg/L		0.2 U	0.2 U		
Xylene (total)	µg/L		0.4 U	0.4 U		
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.3	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SVOCs						
Naphthalene	µg/L		1 U	1 U		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U	0.2 U		
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L		0.2 U	0.2 U		
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U	2 U		
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U	5 U		
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	HWA-CH-B4	HWA-CH-B8	HWA-CH-B9	HWA-CH-B11	HWA-CH-B12
	Sample ID	**HWA-CH-B4-W**	**HWA-CH-B8-W**	**HWA-CH-B9-W**	**HWA-CH-B11-W**	**HWA-CH-B12-W**
	Depth	17-20 ft	8.5-11 ft	7.5-8 ft	8-12 ft	20-23.5 ft
	Date	9/30/2011	9/30/2011	9/30/2011	9/30/2011	9/30/2011
VOCs						
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L		0.2 U	0.2 U		
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U	0.2 U		
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
iso-Propylbenzene	µg/L		0.2 U	0.2 U		
Methyl ethyl ketone	µg/L		5 U	5 U		
Methyl iso butyl ketone	µg/L		2 U	2 U		
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U	0.2 U		
n-Butylbenzene	µg/L		0.2 U	0.2 U		
n-Propylbenzene	µg/L		0.2 U	0.2 U		
sec-Butylbenzene	µg/L		0.2 U	0.2 U		
Styrene	µg/L		0.2 U	0.2 U		
tert-Butylbenzene	µg/L		0.2 U	0.2 U		
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		2 U	2 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	INJ-2	INJ-2	INJ-2	INJ-2	INJ-4
	Sample ID	**INJ-2-052016**	**INJ-2-082016**	**INJ-2-112016**	**INJ-2-032017**	**HWA-INJ-4-020215**
	Depth	8-23 ft	8-23 ft	8-23 ft	8-23 ft	8-23 ft
	Date	5/3/2016	8/12/2016	11/14/2016	3/13/2017	2/2/2015
Conventionals						
Nitrate	µg/L					6200
Sulfate	µg/L					49000
Total Organic Carbon	µg/L					4400
cVOCs						
cis-1,2-Dichloroethene	µg/L	1100	45	190	34	0.54
Tetrachloroethene	µg/L	50	100	270	25	2.1
trans-1,2-Dichloroethene	µg/L	10 U	0.4 U	1 U	0.22	0.2 U
Trichloroethene	µg/L	17	3.5	12	2	0.28
Vinyl chloride	µg/L	11	0.4 U	5.7	2	0.2 U
Dissolved Gases						
Ethane	µg/L					0.5 U
Ethene	µg/L					0.5 U
Methane	µg/L					0.73
Total Metals						
Sodium	µg/L					27000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	65 U	2 U	7 U	1 U	1 U
1,2-Dibromoethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	65 U	2 U	16 U	2.6 U	1 U
2-Chlorotoluene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Bromobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Bromochloromethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Bromoform	µg/L	50 U	2 U	5 U	1 U	1 U
Bromomethane	µg/L	19 U	0.68 U	1 U	0.2 U	0.31 U
Carbon tetrachloride	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Chlorobenzene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	INJ-2	INJ-2	INJ-2	INJ-2	INJ-4
	Sample ID	**INJ-2-052016**	**INJ-2-082016**	**INJ-2-112016**	**INJ-2-032017**	**HWA-INJ-4-020215**
	Depth	8-23 ft	8-23 ft	8-23 ft	8-23 ft	8-23 ft
	Date	5/3/2016	8/12/2016	11/14/2016	3/13/2017	2/2/2015
VOCs						
Chloroethane	µg/L	50 U	2 U	5 U	1 U	1 U
Chloroform	µg/L	10 U	0.4 U	1 U	0.2 U	0.52
Chloromethane	µg/L	50 U	2.6 U	8.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Dibromomethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	10 U	0.54 U	1.4 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Iodomethane	µg/L	140 U	3.6 U	7.5 U	1 U	1.5 U
Methylene chloride	µg/L	100 U	2 U	5 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	10 U	0.4 U	1 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	INJ-6	INJ-9	RMW-4	RMW-4	RMW-4
	Sample ID	**HWA-INJ-6-020215**	**INJ-9-102015**	**RMW-4D-092009**	**RMW-4D-122009**	**RMW-4D-122014**
	Depth	8-23 ft	8-23 ft	15-25 ft	15-25 ft	15-25 ft
	Date	2/2/2015	10/21/2015	9/14/2009	12/15/2009	12/18/2014
BTEX						
Benzene	µg/L			1 U	1 U	
Ethylbenzene	µg/L			1 U	1 U	
Toluene	µg/L			1 U	1 U	
Xylene (meta & para)	µg/L			1 U	1 U	
Xylene (ortho)	µg/L			1 U	1 U	
Xylene (total)	µg/L			1 U	1 U	
Conventionals						
Nitrate	µg/L	7000				
Sulfate	µg/L	91000				
Total Organic Carbon	µg/L	2900				
cPAHs						
Benzo(a)anthracene	µg/L			0.01 U	0.0094 U	
Benzo(a)pyrene	µg/L			0.01 U	0.0094 U	
Benzo(b)fluoranthene	µg/L			0.01 U	0.0094 U	
Benzo(k)fluoranthene	µg/L			0.01 U	0.0094 U	
Chrysene	µg/L			0.01 U	0.0094 U	
cPAHs (MTCA TEQ-HalfND)	µg/L			0.01 U	0.0094 U	
cPAHs (MTCA TEQ-ZeroND)	µg/L			0.01 U	0.0094 U	
Dibenzo(a,h)anthracene	µg/L			0.01 U	0.0094 U	
Indeno(1,2,3-cd)pyrene	µg/L			0.01 U	0.0094 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	400			0.2 U
Tetrachloroethene	µg/L	18	2 U			0.79
trans-1,2-Dichloroethene	µg/L	0.2 U	2 U			0.2 U
Trichloroethene	µg/L	0.33	2 U			0.33
Vinyl chloride	µg/L	0.2 U	10			0.2 U
Dissolved Gases						
Ethane	µg/L	0.5 U				
Ethene	µg/L	0.5 U				
Methane	µg/L	0.65				
SVOCs						
1-Methylnaphthalene	µg/L			0.1 U	0.094 U	
2-Methylnaphthalene	µg/L			0.1 U	0.094 U	
Acenaphthene	µg/L			0.1 U	0.094 U	
Acenaphthylene	µg/L			0.1 U	0.094 U	
Anthracene	µg/L			0.1 U	0.094 U	
Benzo(g,h,i)perylene	µg/L			0.01 U	0.0094 U	
Fluoranthene	µg/L			0.1 U	0.094 U	
Fluorene	µg/L			0.1 U	0.094 U	
Naphthalene	µg/L			0.1 U	0.094 U	
Phenanthrene	µg/L			0.1 U	0.094 U	
Pyrene	µg/L			0.1 U	0.094 U	
Total Metals						
Sodium	µg/L	21000				
TPHs						

Table B.1
Historical Groundwater Data within Study Area

	Location	INJ-6	INJ-9	RMW-4	RMW-4	RMW-4
	Sample ID	**HWA-INJ-6-020215**	**INJ-9-102015**	**RMW-4D-092009**	**RMW-4D-122009**	**RMW-4D-122014**
	Depth	8-23 ft	8-23 ft	15-25 ft	15-25 ft	15-25 ft
	Date	2/2/2015	10/21/2015	9/14/2009	12/15/2009	12/18/2014
TPHs						
Diesel Range Organics	µg/L			290 U	250 U	
Oil Range Organics	µg/L			470 U	400 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	2 U			0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	2 U			0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	2 U			0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	2 U			0.2 U
1,1-Dichloroethane	µg/L	0.2 U	2 U			0.2 U
1,1-Dichloroethene	µg/L	0.2 U	2 U			0.2 U
1,1-Dichloropropene	µg/L	0.2 U	2 U			0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	2.9 U			0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	2 U			0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	2.5 U			0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	13 U			1 U
1,2-Dibromoethane	µg/L	0.2 U	2 U			0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	2 U			0.2 U
1,2-Dichloroethane	µg/L	0.2 U	2 U			0.2 U
1,2-Dichloropropane	µg/L	0.2 U	2 U			0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	2 U			0.2 U
1,3-Dichloropropane	µg/L	0.2 U	2 U			0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	2 U			0.2 U
2,2-Dichloropropane	µg/L	0.2 U	2 U			0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	27 U			1 U
2-Chlorotoluene	µg/L	0.2 U	2 U			0.2 U
4-Chlorotoluene	µg/L	0.2 U	2 U			0.2 U
Bromobenzene	µg/L	0.2 U	2 U			0.2 U
Bromochloromethane	µg/L	0.2 U	2 U			0.2 U
Bromodichloromethane	µg/L	0.2 U	2 U			0.2 U
Bromoform	µg/L	1 U	10 U			1 U
Bromomethane	µg/L	0.31 U	2 U			0.2 U
Carbon tetrachloride	µg/L	0.2 U	2 U			0.2 U
Chlorobenzene	µg/L	0.2 U	2 U			0.2 U
Chloroethane	µg/L	1 U	10 U			1 U
Chloroform	µg/L	0.35	2 U			0.2 U
Chloromethane	µg/L	1 U	10 U			1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	2 U			0.2 U
Dibromochloromethane	µg/L	0.2 U	2 U			0.2 U
Dibromomethane	µg/L	0.2 U	2 U			0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	2 U			0.2 U
Hexachlorobutadiene	µg/L	0.2 U	2 U			0.2 U
Iodomethane	µg/L	1.5 U	10 U			1 U
Methylene chloride	µg/L	1 U	10 U			1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	2 U			0.2 U
Trichlorofluoromethane	µg/L	0.2 U	2 U			0.2 U

Table B.1
Historical Groundwater Data within Study Area

Location	INJ-6	INJ-9	RMW-4	RMW-4	RMW-4
Sample ID	**HWA-INJ-6-020215**	**INJ-9-102015**	**RMW-4D-092009**	**RMW-4D-122009**	**RMW-4D-122014**
Depth	8-23 ft	8-23 ft	15-25 ft	15-25 ft	15-25 ft
Date	2/2/2015	10/21/2015	9/14/2009	12/15/2009	12/18/2014

Table B.1
Historical Groundwater Data within Study Area

	Location	Lot5-5	Lot5-6	Lot8-1	Lot8-3	Lot8-4
	Sample ID	**Lot5-5-W**	**Lot5-6-W**	**Lot8-1-W**	**Lot8-3-W**	**Lot8-4-W**
	Depth	10-22 ft	10-22 ft	10-22 ft	10-22 ft	10-22 ft
	Date	8/3/2015	8/3/2015	8/4/2015	8/4/2015	8/4/2015
cVOCs						
Tetrachloroethene	µg/L	5.1	1.8	2.1	0.43	0.9

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-1	PP-2	PP-3	PP-4	PP-5
	Sample ID	**PP-1-W**	**PP-2-W**	**PP-3-W**	**PP-4-W**	**PP-5-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.52	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	15	3.7	2.8	0.69	2.6
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.51	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-1	PP-2	PP-3	PP-4	PP-5
	Sample ID	**PP-1-W**	**PP-2-W**	**PP-3-W**	**PP-4-W**	**PP-5-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-10	PP-10	PP-11	PP-11	PP-12
	Sample ID	**PP-10-W**	**PP-10-W-D**	**PP-11-W**	**PP-11-25**	**PP-12-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	20-25 ft	7-12 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/18/2013	10/15/2013
BTEX						
Benzene	µg/L					1 U
Ethylbenzene	µg/L					1 U
Toluene	µg/L					1 U
Xylene (meta & para)	µg/L					1 U
Xylene (ortho)	µg/L					1 U
Xylene (total)	µg/L					1 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	420	810	530	13	0.25
trans-1,2-Dichloroethene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Trichloroethene	µg/L	6.3	10	13	0.31	0.2 U
Vinyl chloride	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
TPHs						
Gasoline Range Organics	µg/L					100 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	20 U	20 U	20 U	1 U	1 U
1,2-Dibromoethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	28 U	28 U	28 U	1 U	1.4 U
2-Chlorotoluene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Bromobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Bromochloromethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Bromoform	µg/L	20 U	20 U	20 U	1 U	1 U
Bromomethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Chlorobenzene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Chloroethane	µg/L	20 U	20 U	20 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-10	PP-10	PP-11	PP-11	PP-12
	Sample ID	**PP-10-W**	**PP-10-W-D**	**PP-11-W**	**PP-11-25**	**PP-12-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	20-25 ft	7-12 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/18/2013	10/15/2013
VOCs						
Chloroform	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Chloromethane	µg/L	20 U	20 U	20 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Dibromomethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Iodomethane	µg/L	20 U	20 U	20 U	1 U	1 U
Methylene chloride	µg/L	20 U	20 U	20 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	4 U	4 U	4 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	4 U	4 U	4 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-13	PP-13	PP-14	PP-15	PP-16
	Sample ID	**PP-13-W**	**PP-13-W-D**	**PP-14-W**	**PP-15-W**	**PP-16-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/15/2013	10/15/2013	10/16/2013	10/16/2013	10/16/2013
BTEX						
Benzene	µg/L	1 U	1 U			
Ethylbenzene	µg/L	1 U	1 U			
Toluene	µg/L	1 U	1 U			
Xylene (meta & para)	µg/L	1 U	1 U			
Xylene (ortho)	µg/L	1 U	1 U			
Xylene (total)	µg/L	1 U	1 U			
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	75	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	1700	0.61	0.26
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	92	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
TPHs						
Gasoline Range Organics	µg/L	100 U	100 U			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	50 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1.4 U	50 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	50 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	50 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-13	PP-13	PP-14	PP-15	PP-16
	Sample ID	**PP-13-W**	**PP-13-W-D**	**PP-14-W**	**PP-15-W**	**PP-16-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/15/2013	10/15/2013	10/16/2013	10/16/2013	10/16/2013
VOCs						
Chloroform	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	50 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	13 U	0.26 U	0.26 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	50 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	50 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	10 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-17	PP-18	PP-19	PP-20	PP-21
	Sample ID	**PP-17-W**	**PP-18-W**	**PP-19-W**	**PP-20-W**	**PP-21-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/17/2013	10/17/2013
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	32	1.6	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.45	810	81	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	31	3.6	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	20 U	2 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	20 U	2.8 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Bromoform	µg/L	1 U	1 U	20 U	2 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	4 U	0.54 U	0.27 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	4 U	0.5 U	0.25 U
Chlorobenzene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Chloroethane	µg/L	1 U	1 U	20 U	2 U	1 U
Chloroform	µg/L	0.2 U	0.32	4 U	0.4 U	0.2 U
Chloromethane	µg/L	1 U	1 U	20 U	2 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Dichlorodifluoromethane	µg/L	0.26 U	0.26 U	5.2 U	0.4 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Iodomethane	µg/L	1 U	1 U	20 U	3 U	1.5 U
Methylene chloride	µg/L	1 U	1 U	20 U	4 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-17	PP-18	PP-19	PP-20	PP-21
	Sample ID	**PP-17-W**	**PP-18-W**	**PP-19-W**	**PP-20-W**	**PP-21-W**
	Depth	7-12 ft	7-12 ft	7-12 ft	7-12 ft	7-12 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/17/2013	10/17/2013
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	4 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-22	PP-23	PP-24	PP-25	PP-26
	Sample ID	**PP-22-W**	**PP-23-W**	**PP-24-W**	**PP-25-W**	**PP-26-W**
	Depth	11-16 ft	7-12 ft	7-12 ft	11-16 ft	11-16 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/18/2013
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.73	1.1	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	19	12	7.1	0.55	0.23
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	1.7	1.5	0.34	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1.4 U	1.4 U	1.4 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.27 U	0.27 U	0.27 U	0.2 U
Carbon tetrachloride	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.6	0.2 U	0.29	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.5 U	1.5 U	1.5 U	1.5 U	1 U
Methylene chloride	µg/L	2 U	2 U	2 U	2 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-22	PP-23	PP-24	PP-25	PP-26
	Sample ID	**PP-22-W**	**PP-23-W**	**PP-24-W**	**PP-25-W**	**PP-26-W**
	Depth	11-16 ft	7-12 ft	7-12 ft	11-16 ft	11-16 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/18/2013
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-27	PP-28	PP-29	PP-30	PSD-B2
	Sample ID	**PP-27-W**	**PP-28-W**	**PP-29-W**	**PP-30-W**	**PSD-B2-W**
	Depth	11-16 ft	11-16 ft	11-16 ft	11-16 ft	7-12 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	12/15/2011
BTEX						
Benzene	µg/L					0.2 U
Ethylbenzene	µg/L					0.2 U
Toluene	µg/L					1 U
Xylene (meta & para)	µg/L					0.4 U
Xylene (ortho)	µg/L					0.2 U
Xylene (total)	µg/L					0.4 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.1	0.24	0.2 U	2.3	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SVOCs						
Naphthalene	µg/L					1 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L					0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L					0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L					2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L					5 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-27	PP-28	PP-29	PP-30	PSD-B2
	Sample ID	**PP-27-W**	**PP-28-W**	**PP-29-W**	**PP-30-W**	**PSD-B2-W**
	Depth	11-16 ft	11-16 ft	11-16 ft	11-16 ft	7-12 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	12/15/2011
VOCs						
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L					0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.36	0.31	0.2 U	0.32	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L					0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
iso-Propylbenzene	µg/L					0.2 U
Methyl ethyl ketone	µg/L					5 U
Methyl iso butyl ketone	µg/L					2 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L					0.2 U
n-Butylbenzene	µg/L					0.2 U
n-Propylbenzene	µg/L					0.2 U
sec-Butylbenzene	µg/L					0.2 U
Styrene	µg/L					0.2 U
tert-Butylbenzene	µg/L					0.2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L					2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-6	PP-7	PP-7	PP-8	PP-9
	Sample ID	**PP-6-W**	**PP-7-W**	**PP-7-25**	**PP-8-W**	**PP-9-W**
	Depth	7-12 ft	7-12 ft	20-25 ft	7-12 ft	7-12 ft
	Date	10/14/2013	10/14/2013	10/18/2013	10/15/2013	10/15/2013
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	1.1	0.2 U	220	4 U
Tetrachloroethene	µg/L	1	15	1.9	550	810
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Trichloroethene	µg/L	0.2 U	1.3	0.2 U	190	9.8
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	20 U	20 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1.4 U	1 U	28 U	28 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Bromoform	µg/L	1 U	1 U	1 U	20 U	20 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Chloroethane	µg/L	1 U	1 U	1 U	20 U	20 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Chloromethane	µg/L	1 U	1 U	1 U	20 U	20 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Iodomethane	µg/L	1 U	1 U	1 U	20 U	20 U
Methylene chloride	µg/L	1 U	1 U	1 U	20 U	20 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PP-6	PP-7	PP-7	PP-8	PP-9
	Sample ID	**PP-6-W**	**PP-7-W**	**PP-7-25**	**PP-8-W**	**PP-9-W**
	Depth	7-12 ft	7-12 ft	20-25 ft	7-12 ft	7-12 ft
	Date	10/14/2013	10/14/2013	10/18/2013	10/15/2013	10/15/2013
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	4 U	4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	PSD-B5	Px-SB01	Px-SB01	Px-SB02	Px-SB03
	Sample ID	**PSD-B5-W**	**Px-SB01-GW-0175**	**-SB01Dup-GW-01**	**Px-SB02-GW-0175**	**Px-SB03-GW-0175**
	Depth	8-8 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft
	Date	12/15/2011	4/1/2010	4/1/2010	3/31/2010	3/31/2010
BTEX						
Benzene	µg/L	0.2 U	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	0.2 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	0.4 U	1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L	0.2 U	1 U	1 U	1 U	1 U
Xylene (total)	µg/L	0.4 U	1 U	1 U	1 U	1 U
cPAHs						
Benzo(a)anthracene	µg/L					0.011 U
Benzo(a)pyrene	µg/L					0.011 U
Benzo(b)fluoranthene	µg/L					0.011 U
Benzo(k)fluoranthene	µg/L					0.011 U
Chrysene	µg/L					0.011 U
cPAHs (MTCA TEQ-HalfND)	µg/L					0.011 U
cPAHs (MTCA TEQ-ZeroND)	µg/L					0.011 U
Dibenzo(a,h)anthracene	µg/L					0.011 U
Indeno(1,2,3-cd)pyrene	µg/L					0.011 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	4.1				0.2 U
Tetrachloroethene	µg/L	1.3				0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U				0.2 U
Trichloroethene	µg/L	0.59				0.2 U
Vinyl chloride	µg/L	2				0.2 U
SVOCs						
1-Methylnaphthalene	µg/L					0.11 U
2-Methylnaphthalene	µg/L					0.11 U
Acenaphthene	µg/L					0.11 U
Acenaphthylene	µg/L					0.11 U
Anthracene	µg/L					0.11 U
Benzo(g,h,i)perylene	µg/L					0.011 U
Fluoranthene	µg/L					0.11 U
Fluorene	µg/L					0.11 U
Naphthalene	µg/L	1 U				0.11 U
Phenanthrene	µg/L					0.11 U
Pyrene	µg/L					0.11 U
Total Metals						
Arsenic	µg/L					3 U
Cadmium	µg/L					4 U
Chromium	µg/L					10 U
Lead	µg/L					1 U
Mercury	µg/L					0.5 U
TPHs						
Diesel Range Organics	µg/L		310 U	160 U	310 U	290 U
Gasoline Range Organics	µg/L		100 U	100 U	100 U	100 U
Oil Range Organics	µg/L		490 U	250 U	490 U	460 U
VOCs						

Table B.1
Historical Groundwater Data within Study Area

	Location	PSD-B5	Px-SB01	Px-SB01	Px-SB02	Px-SB03
	Sample ID	**PSD-B5-W**	**Px-SB01-GW-0175**	**-SB01Dup-GW-01**	**Px-SB02-GW-0175**	**Px-SB03-GW-0175**
	Depth	8-8 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft
	Date	12/15/2011	4/1/2010	4/1/2010	3/31/2010	3/31/2010
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U				0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U				0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U				0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U				0.2 U
1,1-Dichloroethane	µg/L	0.2 U				0.2 U
1,1-Dichloroethene	µg/L	0.2 U				0.2 U
1,1-Dichloropropene	µg/L	0.2 U				0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U				0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U				0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U				0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U				1 U
1,2-Dibromoethane	µg/L	0.2 U				0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U				0.2 U
1,2-Dichloroethane	µg/L	0.2 U				0.2 U
1,2-Dichloropropane	µg/L	0.2 U				0.2 U
1,3,5-Trimethylbenzene	µg/L	0.2 U				
1,3-Dichlorobenzene	µg/L	0.2 U				0.2 U
1,3-Dichloropropane	µg/L	0.2 U				0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U				0.2 U
2,2-Dichloropropane	µg/L	0.2 U				0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U				1 U
2-Chlorotoluene	µg/L	0.2 U				0.2 U
2-Hexanone	µg/L	2 U				
4-Chlorotoluene	µg/L	0.2 U				0.2 U
Acetone	µg/L	5 U				
Bromobenzene	µg/L	0.2 U				0.2 U
Bromochloromethane	µg/L	0.2 U				0.2 U
Bromodichloromethane	µg/L	0.2 U				0.2 U
Bromoform	µg/L	1 U				1 U
Bromomethane	µg/L	0.2 U				0.2 U
Carbon disulfide	µg/L	0.2 U				
Carbon tetrachloride	µg/L	0.2 U				0.2 U
Chlorobenzene	µg/L	0.2 U				0.2 U
Chloroethane	µg/L	1 U				1 U
Chloroform	µg/L	0.2 U				0.2 U
Chloromethane	µg/L	1 U				1 U
cis-1,3-Dichloropropene	µg/L	0.2 U				0.2 U
Cymene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U				0.2 U
Dibromomethane	µg/L	0.2 U				0.2 U
Dichlorodifluoromethane	µg/L	0.2 U				0.2 U
Hexachlorobutadiene	µg/L	0.2 U				0.2 U
Iodomethane	µg/L	1 U				1 U
iso-Propylbenzene	µg/L	0.2 U				

Table B.1
Historical Groundwater Data within Study Area

		PSD-B5	Px-SB01	Px-SB01	Px-SB02	Px-SB03
	Location	PSD-B5	Px-SB01	Px-SB01	Px-SB02	Px-SB03
	Sample ID	**PSD-B5-W**	**Px-SB01-GW-0175**	**-SB01Dup-GW-01**	**Px-SB02-GW-0175**	**Px-SB03-GW-0175**
	Depth	8-8 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft	17.5-17.5 ft
	Date	12/15/2011	4/1/2010	4/1/2010	3/31/2010	3/31/2010
VOCs						
Methyl ethyl ketone	µg/L	5 U				
Methyl iso butyl ketone	µg/L	2 U				
Methylene chloride	µg/L	1 U				1 U
Methyl-Tert-Butyl Ether	µg/L	0.2 U				
n-Butylbenzene	µg/L	0.2 U				
n-Propylbenzene	µg/L	0.2 U				
sec-Butylbenzene	µg/L	0.2 U				
Styrene	µg/L	0.2 U				
tert-Butylbenzene	µg/L	0.2 U				
trans-1,3-Dichloropropene	µg/L	0.2 U				0.2 U
Trichlorofluoromethane	µg/L	0.2 U				0.2 U
Vinyl acetate	µg/L	2 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	Px-SB05	Px-SB05	UCCB-1	UCCB-1	UCCB-1
	Sample ID	**Px-SB05-GW-0175**	**-SB05Dup-GW-01**	**UCCB1-37-GW**	**UCCB1-10-GW**	**UCCB1-25-GW**
	Depth	17.5-17.5 ft	17.5-17.5 ft	35-40 ft	9-14 ft	23-28 ft
	Date	4/1/2010	4/1/2010	3/21/2017	3/21/2017	3/21/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	3.7
Tetrachloroethene	µg/L	3.7	3.1	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.31 U	0.31 U	0.31 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.43
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.28 U	0.28 U	0.28 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.4 U	1.4 U	1.4 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	Px-SB05	Px-SB05	UCCB-1	UCCB-1	UCCB-1
	Sample ID	**Px-SB05-GW-0175**	**-SB05Dup-GW-01**	**UCCB1-37-GW**	**UCCB1-10-GW**	**UCCB1-25-GW**
	Depth	17.5-17.5 ft	17.5-17.5 ft	35-40 ft	9-14 ft	23-28 ft
	Date	4/1/2010	4/1/2010	3/21/2017	3/21/2017	3/21/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	RMW-11D	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**RMW-11D-122009**	**UCCMW1D-26-29-V**	**UCCMW-1-032002**	**MW-1(DTW-9.56)**	**HWA-MW-1-1111**
	Depth	27-27 ft	26-29 ft	4.5-14.5 ft	5-15 ft	4.5-14.5 ft
	Date	12/14/2009	2/19/2002	3/6/2002	7/22/2004	11/18/2011
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	29	0.41	4	8.4
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.21		2 U	0.36
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	10 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U		1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	2 U	1 U
Bromomethane	µg/L	0.2 U	1 U	0.2 U	2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Chloroethane	µg/L	1 U	0.2 U	0.2 U	2 U	1 U
Chloroform	µg/L	0.2 U	2.3	0.2 U	2 U	1.2
Chloromethane	µg/L	1 U	0.2 U	0.2 U	2 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U		1 U
Methylene chloride	µg/L	1 U	1 U	1 U	5 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	RMW-11D	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**RMW-11D-122009**	**JCCMW1D-26-29-V**	**UCCMW-1-032002**	**MW-1(DTW-9.56)**	**HWA-MW-1-1111**
	Depth	27-27 ft	26-29 ft	4.5-14.5 ft	5-15 ft	4.5-14.5 ft
	Date	12/14/2009	2/19/2002	3/6/2002	7/22/2004	11/18/2011
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	RMW-4	RMW-4	RMW-4	RMW-4	RMW-11D
	Sample ID	**RMW-4D-062015**	**RMW-4D-122015**	**RMW-4D-062016**	**RMW-4D-122016**	**RMW-11D-092009**
	Depth	15-25 ft	15-25 ft	15-25 ft	15-25 ft	22-32 ft
	Date	6/23/2015	12/8/2015	6/29/2016	12/21/2016	9/14/2009
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.52	2.2	3.6	4.3	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.72	0.56	0.46	0.51	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.28 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1 U	1.4 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.36 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.3 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.34 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.4 U	2.1 U	1.3 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

		RMW-4	RMW-4	RMW-4	RMW-4	RMW-11D
	Location	RMW-4	RMW-4	RMW-4	RMW-4	RMW-11D
	Sample ID	**RMW-4D-062015**	**RMW-4D-122015**	**RMW-4D-062016**	**RMW-4D-122016**	**RMW-11D-092009**
	Depth	15-25 ft	15-25 ft	15-25 ft	15-25 ft	22-32 ft
	Date	6/23/2015	12/8/2015	6/29/2016	12/21/2016	9/14/2009
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-11	UCCB-12	UCCB-13	UCCB-14	UCCB-14
	Sample ID	**UCCB-11-15-W**	**UCCB-12-15-W**	**UCCB-13-16-W**	**UCCB-14-17-Wdup**	**UCCB-14-29-W**
	Depth	15-20 ft	15-20 ft	15-20 ft	16-21 ft	29-34 ft
	Date	2/13/2018	2/13/2018	2/13/2018	2/13/2018	2/13/2018
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	2.8	2.9	4.3	3.1	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-11	UCCB-12	UCCB-13	UCCB-14	UCCB-14
	Sample ID	**UCCB-11-15-W**	**UCCB-12-15-W**	**UCCB-13-16-W**	**UCCB-14-17-Wdup**	**UCCB-14-29-W**
	Depth	15-20 ft	15-20 ft	15-20 ft	16-21 ft	29-34 ft
	Date	2/13/2018	2/13/2018	2/13/2018	2/13/2018	2/13/2018
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-14	UCCB-15	UCCB-16	UCCB-17	UCCB-18
	Sample ID	**UCCB-14-17-W**	**UCCB-15-11-W**	**UCCB-16-11.5-W**	**UCCB-17-17-W**	**UCCB-18-17.5-W**
	Depth	16-21 ft	10-15 ft	10-15 ft	16-21 ft	15-20 ft
	Date	2/13/2018	2/13/2018	2/13/2018	2/13/2018	2/13/2018
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.22	18	0.2 U	0.2 U
Tetrachloroethene	µg/L	3.2	7.8	1.5	2	3.8
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.35	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.43	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-14	UCCB-15	UCCB-16	UCCB-17	UCCB-18
	Sample ID	**UCCB-14-17-W**	**UCCB-15-11-W**	**UCCB-16-11.5-W**	**UCCB-17-17-W**	**UCCB-18-17.5-W**
	Depth	16-21 ft	10-15 ft	10-15 ft	16-21 ft	15-20 ft
	Date	2/13/2018	2/13/2018	2/13/2018	2/13/2018	2/13/2018
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-2	UCCB-2	UCCB-2	UCCB-3	UCCB-3
	Sample ID	**UCCB2-25.0-GW**	**UCCB2-37.0-GW**	**UCCB2-9.0-GW**	**UCCB3-38-GW**	**UCCB3-4-GW**
	Depth	22-27 ft	35-40 ft	7-12 ft	35-40 ft	1-6 ft
	Date	4/5/2017	4/5/2017	4/5/2017	3/24/2017	3/24/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.41	0.37	0.2 U	0.2 U
Tetrachloroethene	µg/L	35	21	2.6	0.45	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.48	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	1.4 U	1.4 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-2	UCCB-2	UCCB-2	UCCB-3	UCCB-3
	Sample ID	**UCCB2-25.0-GW**	**UCCB2-37.0-GW**	**UCCB2-9.0-GW**	**UCCB3-38-GW**	**UCCB3-4-GW**
	Depth	22-27 ft	35-40 ft	7-12 ft	35-40 ft	1-6 ft
	Date	4/5/2017	4/5/2017	4/5/2017	3/24/2017	3/24/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-3	UCCB-4	UCCB-4	UCCB-4	UCCB-5
	Sample ID	**UCCB3-27-GW**	**UCCB4-35.5-GW**	**UCCB4-9.5-GW**	**UCCB4-21.0-GW**	**UCCB5-15-GW**
	Depth	25-30 ft	33-38 ft	7-12 ft	18-23 ft	10-20 ft
	Date	3/24/2017	4/5/2017	4/5/2017	4/5/2017	3/22/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	4.1	9.3	0.2 U	14	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.25 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.26 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	1.1
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.4 U	1.4 U	1.4 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-3	UCCB-4	UCCB-4	UCCB-4	UCCB-5
	Sample ID	**UCCB3-27-GW**	**UCCB4-35.5-GW**	**UCCB4-9.5-GW**	**UCCB4-21.0-GW**	**UCCB5-15-GW**
	Depth	25-30 ft	33-38 ft	7-12 ft	18-23 ft	10-20 ft
	Date	3/24/2017	4/5/2017	4/5/2017	4/5/2017	3/22/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-5	UCCB-5	UCCB-8	UCCB-8	UCCB-9
	Sample ID	**UCCB5-32-GW**	**UCCB5-43-GW**	**UCCB8-23-GW**	**UCCB8-37-GW**	**UCCB9-31-GW**
	Depth	29-34 ft	40-45 ft	23-28 ft	35-40 ft	28-33 ft
	Date	3/22/2017	3/22/2017	3/27/2017	3/27/2017	3/22/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	1.2	0.25	0.2 U
Tetrachloroethene	µg/L	4.2	1.5	64	21	0.61
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.22	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.55	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.2 U
Bromobenzene	µg/L	0.26 U	0.26 U	0.26 U	0.26 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.43	1.6	0.2 U	0.66	0.74
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-5	UCCB-5	UCCB-8	UCCB-8	UCCB-9
	Sample ID	**UCCB5-32-GW**	**UCCB5-43-GW**	**UCCB8-23-GW**	**UCCB8-37-GW**	**UCCB9-31-GW**
	Depth	29-34 ft	40-45 ft	23-28 ft	35-40 ft	28-33 ft
	Date	3/22/2017	3/22/2017	3/27/2017	3/27/2017	3/22/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-9	UCCB-9	UCCB-10	UCCB-10	UCCB-10
	Sample ID	**UCCB9-18-GW**	**UCCB9-41-GW**	**UCCB10-10.5-GW**	**UCCB10-22-GW**	**UCCB10-36-GW**
	Depth	15-20 ft	39-44 ft	7-12 ft	22-27 ft	35-40 ft
	Date	3/22/2017	3/23/2017	3/20/2017	3/20/2017	3/20/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	3.1	9	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	1.1	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	1.3	0.89	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1.4 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	1 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.23	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	1.2	5.7	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCB-9	UCCB-9	UCCB-10	UCCB-10	UCCB-10
	Sample ID	**UCCB9-18-GW**	**UCCB9-41-GW**	**UCCB10-10.5-GW**	**UCCB10-22-GW**	**UCCB10-36-GW**
	Depth	15-20 ft	39-44 ft	7-12 ft	22-27 ft	35-40 ft
	Date	3/22/2017	3/23/2017	3/20/2017	3/20/2017	3/20/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**UCCMW-1-032014**	**UCCMW-1-052014**	**UCCMW-1-062014**	**UCCMW-1-082014**	**UCCMW-1-092014**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft
	Date	3/13/2014	5/12/2014	6/5/2014	8/19/2014	9/17/2014
Conventionals						
Nitrate	µg/L	4400	6000			
Sulfate	µg/L	27000	13000			
Total Organic Carbon	µg/L	1000 U	1000 U			
cVOCs						
cis-1,2-Dichloroethene	µg/L	120	13	5.4	0.4	0.2 U
Tetrachloroethene	µg/L	130	21	15	9.5	4.3
trans-1,2-Dichloroethene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	30	4.9	2.9	0.32	0.2 U
Vinyl chloride	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U			
Ethene	µg/L	0.5 U	0.5 U			
Methane	µg/L	0.5 U	0.5 U			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	1 U	0.27 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	5 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	9.5 U	1 U	15 U	1 U	1 U
2-Chlorotoluene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	5 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	1 U	0.2 U	0.26 U	0.28 U	0.2 U
Carbon tetrachloride	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	5 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	1 U	0.2 U	0.2 U	0.29	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**UCCMW-1-032014**	**UCCMW-1-052014**	**UCCMW-1-062014**	**UCCMW-1-082014**	**UCCMW-1-092014**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft
	Date	3/13/2014	5/12/2014	6/5/2014	8/19/2014	9/17/2014
VOCs						
Chloromethane	µg/L	5 U	1 U	1 U	1.6 U	1 U
cis-1,3-Dichloropropene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	1 U	0.2 U	0.2 U	0.33 U	0.2 U
Hexachlorobutadiene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	5 U	1 U	1.4 U	1 U	1 U
Methylene chloride	µg/L	6.5 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-2
	Sample ID	**UCCMW-1-052016**	**UCCMW-1-082016**	**UCCMW-1-112016**	**UCCMW-1-032017**	**UCCMW-2-032002**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	3.5-13.5 ft
	Date	5/4/2016	8/12/2016	11/11/2016	3/13/2017	3/6/2002
Conventionals						
Nitrate	µg/L	770	120	140	130	
Sulfate	µg/L	25000 U	25000 U	5000 U	25000 U	
Total Organic Carbon	µg/L	2400000	650000	460000	260000	
cVOCs						
cis-1,2-Dichloroethene	µg/L	310	190	110	41	0.2 U
Tetrachloroethene	µg/L	3.7	1 U	1 U	0.54	0.41
trans-1,2-Dichloroethene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Trichloroethene	µg/L	2.3	1 U	1 U	0.4 U	
Vinyl chloride	µg/L	11	5.3	21	12	0.2 U
Dissolved Gases						
Ethane	µg/L	67 U	91 U	110 U	100 U	
Ethene	µg/L	7.7	8.7 U	16 U	11 U	
Methane	µg/L	5000	6400	13000	18000	
Dissolved Metals						
Sodium	µg/L			140000	88000	
Total Metals						
Sodium	µg/L	310000	130000	150000	100000	
TPHs						
Gasoline Range Organics	µg/L					100 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1,1-Trichloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1,2-Trichloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1-Dichloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1-Dichloroethene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,1-Dichloropropene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2,3-Trichloropropane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	13 U	5 U	5 U	2 U	1 U
1,2-Dibromoethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2-Dichlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2-Dichloroethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,2-Dichloropropane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,3-Dichlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,3-Dichloropropane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
1,4-Dichlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
2,2-Dichloropropane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	13 U	5 U	19 U	5.2 U	1 U
2-Chlorotoluene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
4-Chlorotoluene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Bromobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Bromochloromethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Bromodichloromethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-2
	Sample ID	**UCCMW-1-052016**	**UCCMW-1-082016**	**UCCMW-1-112016**	**UCCMW-1-032017**	**UCCMW-2-032002**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	3.5-13.5 ft
	Date	5/4/2016	8/12/2016	11/11/2016	3/13/2017	3/6/2002
VOCs						
Bromoform	µg/L	10 U	5 U	5 U	2 U	1 U
Bromomethane	µg/L	3.7 U	1.7 U	1.3 U	0.4 U	0.2 U
Carbon tetrachloride	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Chlorobenzene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Chloroethane	µg/L	10 U	5 U	5 U	2 U	0.2 U
Chloroform	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Chloromethane	µg/L	10 U	6.5 U	9.5 U	2 U	0.2 U
cis-1,3-Dichloropropene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Dibromochloromethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Dibromomethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Dichlorodifluoromethane	µg/L	2 U	1.4 U	1 U	0.4 U	0.2 U
Hexachlorobutadiene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Iodomethane	µg/L	27 U	9 U	9.5 U	2 U	1 U
Methylene chloride	µg/L	20 U	5 U	5 U	2 U	1 U
trans-1,3-Dichloropropene	µg/L	2 U	1 U	1 U	0.4 U	0.2 U
Trichlorofluoromethane	µg/L	2 U	1 U	1 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**UCCMW-1-122014**	**UCCMW-1-032015**	**UCCMW-1-072015**	**UCCMW-1-102015**	**UCCMW-1-012016**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft
	Date	12/17/2014	3/24/2015	7/22/2015	10/21/2015	1/28/2016
Conventionals						
Nitrate	µg/L		50 U	160	270	50 U
Sulfate	µg/L		30000	50000 U	25000	5000 U
Total Organic Carbon	µg/L		840000	550000	320000	190000
cVOCs						
cis-1,2-Dichloroethene	µg/L	27	8.1	130	1600	760
Tetrachloroethene	µg/L	80	2.5	2.5	10 U	6.2
trans-1,2-Dichloroethene	µg/L		0.2 U	1 U	10 U	4 U
Trichloroethene	µg/L	14	1.1	1.4	10 U	4 U
Vinyl chloride	µg/L	0.4 U	0.21	5.4	21	15
Dissolved Gases						
Ethane	µg/L		65	500 U	500 U	22 U
Ethene	µg/L		52	4.6	0.5 U	9.8 U
Methane	µg/L		110	4200	7700	6000
Dissolved Metals						
Sodium	µg/L			57000	61000	62000
Total Metals						
Sodium	µg/L		210000	66000	59000	60000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,1,1-Trichloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,1,2,2-Tetrachloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,1,2-Trichloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,1-Dichloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,1-Dichloroethene	µg/L		0.2 U	1 U	10 U	4 U
1,1-Dichloropropene	µg/L		0.2 U	1 U	10 U	4 U
1,2,3-Trichlorobenzene	µg/L		0.2 U	1.7 U	15 U	4 U
1,2,3-Trichloropropane	µg/L		0.2 U	1 U	10 U	4 U
1,2,4-Trichlorobenzene	µg/L		0.2 U	1.7 U	13 U	4 U
1,2-Dibromo-3-chloropropane	µg/L		1 U	5 U	65 U	20 U
1,2-Dibromoethane	µg/L		0.2 U	1 U	10 U	4 U
1,2-Dichlorobenzene	µg/L		0.2 U	1 U	10 U	4 U
1,2-Dichloroethane	µg/L		0.2 U	1 U	10 U	4 U
1,2-Dichloropropane	µg/L		0.2 U	1 U	10 U	4 U
1,3-Dichlorobenzene	µg/L		0.2 U	1 U	10 U	4 U
1,3-Dichloropropane	µg/L		0.2 U	1 U	10 U	4 U
1,4-Dichlorobenzene	µg/L		0.2 U	1 U	10 U	4 U
2,2-Dichloropropane	µg/L		0.2 U	1 U	10 U	4 U
2-Chloroethyl vinyl ether	µg/L		1 U	15 U	140 U	20 U
2-Chlorotoluene	µg/L		0.2 U	1 U	10 U	4 U
4-Chlorotoluene	µg/L		0.2 U	1 U	10 U	4 U
Bromobenzene	µg/L		0.2 U	1 U	10 U	4 U
Bromochloromethane	µg/L		0.2 U	1 U	10 U	4 U
Bromodichloromethane	µg/L		0.2 U	1 U	10 U	4 U
Bromoform	µg/L		1 U	5 U	50 U	20 U
Bromomethane	µg/L		0.2 U	1 U	10 U	5.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1	UCCMW-1
	Sample ID	**UCCMW-1-122014**	**UCCMW-1-032015**	**UCCMW-1-072015**	**UCCMW-1-102015**	**UCCMW-1-012016**
	Depth	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft
	Date	12/17/2014	3/24/2015	7/22/2015	10/21/2015	1/28/2016
VOCs						
Carbon tetrachloride	µg/L		0.2 U	1 U	10 U	4 U
Chlorobenzene	µg/L		0.2 U	1 U	10 U	4 U
Chloroethane	µg/L		1 U	5 U	50 U	20 U
Chloroform	µg/L		2.7	1 U	10 U	4 U
Chloromethane	µg/L		1 U	5 U	50 U	20 U
cis-1,3-Dichloropropene	µg/L		0.2 U	1 U	10 U	4 U
Dibromochloromethane	µg/L		0.2 U	1 U	10 U	4 U
Dibromomethane	µg/L		0.2 U	1 U	10 U	4 U
Dichlorodifluoromethane	µg/L		0.2 U	1.4 U	10 U	4 U
Hexachlorobutadiene	µg/L		0.2 U	1 U	10 U	4 U
Iodomethane	µg/L		1 U	5 U	50 U	28 U
Methylene chloride	µg/L		1 U	5 U	50 U	20 U
trans-1,3-Dichloropropene	µg/L		0.2 U	1 U	10 U	4 U
Trichlorofluoromethane	µg/L		0.2 U	1 U	10 U	4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-11
	Sample ID	**UCCMW-10-01201**	**UCCMW-10-08201**	**UCCMW-10-03201**	**UCCMW-10-03102**	**UCCMW-11-05201**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	18-23 ft
	Date	1/29/2016	8/11/2016	3/9/2017	3/10/2020	5/15/2014
BTEX						
Benzene	µg/L				0.2 U	
Ethylbenzene	µg/L				0.2 U	
Toluene	µg/L				1 U	
Xylene (meta & para)	µg/L				0.4 U	
Xylene (ortho)	µg/L				0.2 U	
Xylene (total)	µg/L				0.4 U	
Conventionals						
Dissolved Oxygen	mg/L				0.74	
Nitrate	µg/L					1900
ORP	mV				58.1	
pH	pH				5.98	
Sulfate	µg/L					13000
Total Organic Carbon	µg/L					1000 U
Turbidity	ntu				134	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.42	1.8	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.67	3.1	14	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.36	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.26	0.2 U	0.02 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.22 UJ	0.93
Ethene	µg/L				0.29 UJ	0.5 U
Methane	µg/L				8 J	3.2
SVOCs						
Naphthalene	µg/L				1 U	
Total Metals						
Arsenic	µg/L				3.3 U	
TPHs						
Diesel Range Organics	µg/L				210 U	
Gasoline Range Organics	µg/L				100 U	
Oil Range Organics	µg/L				210 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.31 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L				0.2 U	
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-11
	Sample ID	**UCCMW-10-01201**	**UCCMW-10-08201**	**UCCMW-10-03201**	**UCCMW-10-03102**	**UCCMW-11-05201**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	18-23 ft
	Date	1/29/2016	8/11/2016	3/9/2017	3/10/2020	5/15/2014
VOCs						
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.02 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L				0.2 U	
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1.6 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L				2 U	
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L				5 U	
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L				0.2 U	
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L				0.2 U	
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.2 U
Iodomethane	µg/L	1.4 U	1 U	1 U	1.5 U	1 U
iso-Propylbenzene	µg/L				0.2 U	
Methyl ethyl ketone	µg/L				5 U	
Methyl iso butyl ketone	µg/L				2 U	
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L				0.2 U	
n-Butylbenzene	µg/L				0.2 U	
n-Propylbenzene	µg/L				0.2 U	
sec-Butylbenzene	µg/L				0.2 U	
Styrene	µg/L				0.2 U	
tert-Butylbenzene	µg/L				0.2 U	
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L				1 U	

Table B.1
Historical Groundwater Data within Study Area

Location	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-11
Sample ID	**JCCMW-10-01201(**	**JCCMW-10-08201(**	**JCCMW-10-03201**	**JCCMW-10-03102(**	**JCCMW-11-05201**
Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	18-23 ft
Date	1/29/2016	8/11/2016	3/9/2017	3/10/2020	5/15/2014

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10
	Sample ID	UCCMW-10-122014	UCCMW-10-012015	UCCMW-10-042015	UCCMW-10-072015	UCCMW-10-102015
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/11/2014	1/29/2015	4/2/2015	7/9/2015	10/26/2015
BTEX						
Benzene	µg/L		1 U	1 U	1 U	1 U
Ethylbenzene	µg/L		1 U	1 U	1 U	1 U
Toluene	µg/L		1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L		1 U	1 U	1 U	1 U
Xylene (ortho)	µg/L		1 U	1 U	1 U	1 U
Xylene (total)	µg/L		2	1 U	1 U	2
Conventionals						
Total Organic Carbon	µg/L				19000	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.3		0.2 U	0.2 U	3
trans-1,2-Dichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dissolved Metals						
Arsenic	µg/L			3 U	3 U	
Cadmium	µg/L			4 U	4 U	
Chromium	µg/L			10 U	10 U	
Lead	µg/L			1 U	1 U	
Total Metals						
Arsenic	µg/L			3.8	15	
Cadmium	µg/L			4.4 U	4.4 U	
Chromium	µg/L			19	94	
Lead	µg/L			1.5	8	
TPHs						
Diesel Range Organics	µg/L		250	260 U	300 U	250
Gasoline Range Organics	µg/L		100	100 U	100 U	100
Oil Range Organics	µg/L		410	410 U	490 U	400
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U		0.2 U	0.26 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U		1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10	UCCMW-10
	Sample ID	**JCCMW-10-122014**	**JCCMW-10-012015**	**JCCMW-10-042015**	**JCCMW-10-072015**	**JCCMW-10-102015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/11/2014	1/29/2015	4/2/2015	7/9/2015	10/26/2015
VOCs						
1,3-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	20 U		1 U	1 U	2.4 U
2-Chlorotoluene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U		1 U	1 U	1 U
Bromomethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U		1 U	1 U	1 U
Chloroform	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U		1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.28 U		0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	3.7 U		1 U	1 U	1 U
Methylene chloride	µg/L	1 U		1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11
	Sample ID	**UCCMW-11-062014**	**UCCMW-11-082014**	**UCCMW-11-092014**	**UCCMW-11-100814**	**UCCMW-11-110314**
	Depth	18-23 ft	18-23 ft	18-23 ft	18-23 ft	18-23 ft
	Date	6/2/2014	8/13/2014	9/15/2014	10/8/2014	11/3/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.51 U	0.2 U	0.26 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.2 U	0.32 U	0.45 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	2.7 U	1 U	1.9 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11
	Sample ID	**UCCMW-11-062014**	**UCCMW-11-082014**	**UCCMW-11-092014**	**UCCMW-11-100814**	**UCCMW-11-110314**
	Depth	18-23 ft	18-23 ft	18-23 ft	18-23 ft	18-23 ft
	Date	6/2/2014	8/13/2014	9/15/2014	10/8/2014	11/3/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11S
	Sample ID	**JCCMW-11-122014**	**CCMW-11D-01201**	**JCCMW-11-021215**	**JCCMW-11-032015**	**CCMW-11S-05201**
	Depth	18-23 ft	18-23 ft	18-23 ft	18-23 ft	8-18 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/11/2014
Conventionals						
Nitrate	µg/L					3800
Sulfate	µg/L					90000
Total Organic Carbon	µg/L					2000
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.2	0.2 U	0.2 U	0.2 U	0.28
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					0.69
Ethene	µg/L					0.5 U
Methane	µg/L					3.5
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.31 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2.1 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11	UCCMW-11S
	Sample ID	**JCCMW-11-12201**	**CCMW-11D-01201**	**JCCMW-11-02121**	**JCCMW-11-03201**	**CCMW-11S-05201**
	Depth	18-23 ft	18-23 ft	18-23 ft	18-23 ft	8-18 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/11/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.3 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.7 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S
	Sample ID	**CCMW-11S-06201**	**CCMW-11S-08201**	**CCMW-11S-09201**	**CCMW-11S-10081**	**CCMW-11S-11031**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/2/2014	8/13/2014	9/15/2014	10/8/2014	11/3/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.22	0.2 U	0.3	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.51 U	0.2 U	0.26 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.2 U	0.32 U	0.45 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	2.7 U	1 U	1.9 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S
	Sample ID	**CCMW-11S-06201**	**CCMW-11S-08201**	**CCMW-11S-09201**	**CCMW-11S-10081**	**CCMW-11S-11031**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/2/2014	8/13/2014	9/15/2014	10/8/2014	11/3/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-12D
	Sample ID	**CCMW-11S-12201**	**CCMW-11S-01201**	**CCMW-11S-02121**	**CCMW-11S-03201**	**CCMW-12D-05201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	25-30 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/13/2014
Conventionals						
Nitrate	µg/L					440
Sulfate	µg/L					14000
Total Organic Carbon	µg/L					1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.3	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					12
Ethene	µg/L					6.3
Methane	µg/L					71
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2.1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-11S	UCCMW-12D
	Sample ID	**CCMW-11S-12201**	**CCMW-11S-01201**	**CCMW-11S-02121**	**CCMW-11S-03201**	**CCMW-12D-05201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	25-30 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/13/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.3 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.27 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.7 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D
	Sample ID	**CCMW-12D-06201**	**CCMW-12D-08201**	**CCMW-12D-09201**	**CCMW-12D-10081**	**CCMW-12D-11031**
	Depth	25-30 ft	25-30 ft	25-30 ft	25-30 ft	25-30 ft
	Date	6/3/2014	8/14/2014	9/15/2014	10/8/2014	11/3/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.41	0.31	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.51 U	0.2 U	0.26 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.2 U	0.32 U	0.45 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	2.7 U	1 U	1.9 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D
	Sample ID	**CCMW-12D-06201**	**CCMW-12D-08201**	**CCMW-12D-09201**	**CCMW-12D-10081**	**CCMW-12D-11031**
	Depth	25-30 ft	25-30 ft	25-30 ft	25-30 ft	25-30 ft
	Date	6/3/2014	8/14/2014	9/15/2014	10/8/2014	11/3/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12S
	Sample ID	**CCMW-12D-12201**	**CCMW-12D-01201**	**CCMW-12D-02121**	**CCMW-12D-03201**	**CCMW-12S-05201**
	Depth	25-30 ft	25-30 ft	25-30 ft	25-30 ft	8-18 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/10/2014
Conventionals						
Nitrate	µg/L					5700
Sulfate	µg/L					110000
Total Organic Carbon	µg/L					1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.82	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					0.5 U
Methane	µg/L					0.89
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2.1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1.3 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12D	UCCMW-12S
	Sample ID	**CCMW-12D-12201**	**CCMW-12D-01201**	**CCMW-12D-02121**	**CCMW-12D-03201**	**CCMW-12S-05201**
	Depth	25-30 ft	25-30 ft	25-30 ft	25-30 ft	8-18 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	5/10/2014
VOCs						
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.7 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S
	Sample ID	**CCMW-12S-06201**	**CCMW-12S-08201**	**CCMW-12S-09201**	**CCMW-12S-10081**	**CCMW-12S-11031**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/3/2014	8/14/2014	9/15/2014	10/8/2014	11/3/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.31	0.22	0.25	0.2 U	0.22
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.51 U	0.2 U	0.26 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.2 U	0.32 U	0.45 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	2.7 U	1 U	1.9 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S
	Sample ID	**CCMW-12S-06201**	**CCMW-12S-08201**	**CCMW-12S-09201**	**CCMW-12S-10081**	**CCMW-12S-11031**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/3/2014	8/14/2014	9/15/2014	10/8/2014	11/3/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-13D
	Sample ID	**CCMW-12S-12201**	**CCMW-12S-01201**	**CCMW-12S-02121**	**CCMW-12S-03201**	**CCMW-13D-06201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	19-24 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	6/4/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.74	0.2 U	0.34	0.22	0.24
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2.1 U	4.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1.3 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.7 U	1 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-12S	UCCMW-13D
	Sample ID	**CCMW-12S-12201**	**CCMW-12S-01201**	**CCMW-12S-02121**	**CCMW-12S-03201**	**CCMW-13D-06201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	19-24 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/16/2015	6/4/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13S
	Sample ID	**CCMW-13D-01201**	**CMW-13D-Dup-021**	**CCMW-13D-02121**	**CCMW-13D-03201**	**CCMW-13S-05201**
	Depth	19-24 ft	19-24 ft	19-24 ft	19-24 ft	9-19 ft
	Date	1/9/2015	2/12/2015	2/12/2015	3/24/2015	5/15/2014
Conventionals						
Nitrate	µg/L					4600
Sulfate	µg/L					59000
Total Organic Carbon	µg/L					1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.24	0.7	0.25	0.32	1
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					0.5 U
Ethene	µg/L					0.5 U
Methane	µg/L					0.5 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.31 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	3.3 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.38 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13S
	Sample ID	**CCMW-13D-01201**	**CMW-13D-Dup-021**	**CCMW-13D-02121**	**CCMW-13D-03201**	**CCMW-13S-05201**
	Depth	19-24 ft	19-24 ft	19-24 ft	19-24 ft	9-19 ft
	Date	1/9/2015	2/12/2015	2/12/2015	3/24/2015	5/15/2014
VOCs						
Chloromethane	µg/L	1 U	1.3 U	1.3 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.31 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.7 U	1.7 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D
	Sample ID	CCMW-13D-08201	CCMW-13D-09201	CCMW-13D-10081	CCMW-13D-11031	CCMW-13D-12201
	Depth	19-24 ft	19-24 ft	19-24 ft	19-24 ft	19-24 ft
	Date	8/19/2014	9/16/2014	10/8/2014	11/3/2014	12/18/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.78	0.57	0.34	0.73
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.27 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1.4 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.28 U	0.2 U	0.26 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1.6 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.33 U	0.2 U	0.32 U	0.45 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.9 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D	UCCMW-13D
	Sample ID	**CCMW-13D-08201**	**CCMW-13D-09201**	**CCMW-13D-10081**	**CCMW-13D-11031**	**CCMW-13D-12201**
	Depth	19-24 ft	19-24 ft	19-24 ft	19-24 ft	19-24 ft
	Date	8/19/2014	9/16/2014	10/8/2014	11/3/2014	12/18/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S
	Sample ID	**CCMW-13S-06201**	**CCMW-13S-08201**	**CCMW-13S-09201**	**CCMW-13S-10081**	**CCMW-13S-11031**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	6/4/2014	8/19/2014	9/16/2014	10/8/2014	11/3/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.6	0.9	1.6	1.3	1.2
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.28 U	0.2 U	0.26 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.6 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.33 U	0.2 U	0.32 U	0.45 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U	1 U	1 U	1.9 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S
	Sample ID	**CCMW-13S-06201**	**CCMW-13S-08201**	**CCMW-13S-09201**	**CCMW-13S-10081**	**CCMW-13S-11031**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	6/4/2014	8/19/2014	9/16/2014	10/8/2014	11/3/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-14D
	Sample ID	**CCMW-13S-12201**	**CCMW-13S-01201**	**CCMW-13S-02121**	**CCMW-13S-03201**	**CCMW-14D-05201**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	21-26 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/24/2015	5/13/2014
Conventionals						
Nitrate	µg/L					3400
Sulfate	µg/L					29000
Total Organic Carbon	µg/L					1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.5	1	0.7	0.68	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					0.5 U
Ethene	µg/L					0.5 U
Methane	µg/L					1.8
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	3.3 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.38 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.21	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-13S	UCCMW-14D
	Sample ID	**CCMW-13S-12201**	**CCMW-13S-01201**	**CCMW-13S-02121**	**CCMW-13S-03201**	**CCMW-14D-05201**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	21-26 ft
	Date	12/18/2014	1/9/2015	2/12/2015	3/24/2015	5/13/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.3 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.27 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.7 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D
	Sample ID	**CCMW-14D-11031**	**CCMW-14D-12201**	**CCMW-14D-01201**	**CCMW-14D-02131**	**CCMW-14D-03201**
	Depth	21-26 ft	21-26 ft	21-26 ft	21-26 ft	21-26 ft
	Date	11/3/2014	12/18/2014	1/9/2015	2/13/2015	3/31/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.58	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.27 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.38 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1.3 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.45 U	0.2 U	0.2 U	0.31 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1.7 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D
	Sample ID	**CCMW-14D-11031**	**CCMW-14D-12201**	**CCMW-14D-01201**	**CCMW-14D-02131**	**CCMW-14D-03201**
	Depth	21-26 ft	21-26 ft	21-26 ft	21-26 ft	21-26 ft
	Date	11/3/2014	12/18/2014	1/9/2015	2/13/2015	3/31/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D
	Sample ID	**CMW-14D-Dup-052**	**CCMW-14D-06201**	**CCMW-14D-08201**	**CCMW-14D-09201**	**CCMW-14D-10081**
	Depth	21-26 ft	21-26 ft	21-26 ft	21-26 ft	21-26 ft
	Date	5/13/2014	6/4/2014	8/19/2014	9/16/2014	10/8/2014
Conventionals						
Nitrate	µg/L	470				
Sulfate	µg/L	15000				
Total Organic Carbon	µg/L	1000 U				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.61	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	12				
Ethene	µg/L	6.5				
Methane	µg/L	77				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.29 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	4.9 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.28 U	0.2 U	0.26 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D	UCCMW-14D
	Sample ID	**CMW-14D-Dup-052**	**CCMW-14D-06201**	**CCMW-14D-08201**	**CCMW-14D-09201**	**CCMW-14D-10081**
	Depth	21-26 ft	21-26 ft	21-26 ft	21-26 ft	21-26 ft
	Date	5/13/2014	6/4/2014	8/19/2014	9/16/2014	10/8/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.6 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.27 U	0.2 U	0.33 U	0.2 U	0.32 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.3 U	1 U	1 U	1.9 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S
	Sample ID	**CCMW-14S-05201**	**CCMW-14S-06201**	**CCMW-14S-08201**	**CCMW-14S-09201**	**CCMW-14S-10081**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	5/11/2014	6/4/2014	8/19/2014	9/16/2014	10/8/2014
Conventionals						
Nitrate	µg/L	3900				
Sulfate	µg/L	110000				
Total Organic Carbon	µg/L	2800				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	6	6.5	6.1	6.2	6.5
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	1.3				
Ethene	µg/L	0.67				
Methane	µg/L	5.8				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.31 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	4.9 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.28 U	0.2 U	0.26 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S
	Sample ID	**CCMW-14S-05201**	**CCMW-14S-06201**	**CCMW-14S-08201**	**CCMW-14S-09201**	**CCMW-14S-10081**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	5/11/2014	6/4/2014	8/19/2014	9/16/2014	10/8/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.6 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.33 U	0.2 U	0.32 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.3 U	1 U	1 U	1.9 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S
	Sample ID	**CCMW-14S-11031**	**CCMW-14S-12201**	**CCMW-14S-01201**	**CCMW-14S-02131**	**CCMW-14S-03201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	11/3/2014	12/18/2014	1/9/2015	2/13/2015	3/31/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	6.1	3.8	2	2.2	1.7
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.27 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.38 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1.3 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.45 U	0.2 U	0.2 U	0.31 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1.7 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S	UCCMW-14S
	Sample ID	**CCMW-14S-11031**	**CCMW-14S-12201**	**CCMW-14S-01201**	**CCMW-14S-02131**	**CCMW-14S-03201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	11/3/2014	12/18/2014	1/9/2015	2/13/2015	3/31/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-15	UCCMW-15	UCCMW-15	UCCMW-15	UCCMW-15
	Sample ID	**UCCMW-15-052014**	**UCCMW-15-062014**	**UCCMW-15-082014**	**UCCMW-15-092014**	**UCCMW-15-021318**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/11/2014	6/5/2014	8/14/2014	9/15/2014	2/13/2018
Conventionals						
Nitrate	µg/L	3600				
Sulfate	µg/L	42000				
Total Organic Carbon	µg/L	1400				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	1.5
Tetrachloroethene	µg/L	4.8	6.1	4.2	2.8	1.8
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.25 U	0.2 U	0.25
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	0.5 U				
Ethene	µg/L	0.5 U				
Methane	µg/L	0.93				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.31 U	0.2 U	0.2 U	0.2 U	0.25 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	15 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.26 U	0.51 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.27

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-15	UCCMW-15	UCCMW-15	UCCMW-15	UCCMW-15
	Sample ID	**UCCMW-15-052014**	**UCCMW-15-062014**	**UCCMW-15-082014**	**UCCMW-15-092014**	**UCCMW-15-021318**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/11/2014	6/5/2014	8/14/2014	9/15/2014	2/13/2018
VOCs						
Chloromethane	µg/L	1 U	1 U	1.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.28 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.4 U	2.7 U	1 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16
	Sample ID	UCCMW-16-032015	UCCMW-16-072015	UCCMW-16-102015	UCCMW-16-022016	UCCMW-16-052016
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	3/24/2015	7/17/2015	10/20/2015	2/1/2016	5/3/2016
Conventionals						
Nitrate	µg/L				2500	
Sulfate	µg/L				14000	
Total Organic Carbon	µg/L				1000 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.56	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	
Ethene	µg/L				0.5 U	
Methane	µg/L				2.3	
Dissolved Metals						
Sodium	µg/L				11000	
Total Metals						
Sodium	µg/L				12000	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.39 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.36 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1.3 U	1.3 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	2 U	2.3 U	2.3 U	1.3 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.58 U	0.37 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16
	Sample ID	**UCCMW-16-032015**	**UCCMW-16-072015**	**UCCMW-16-102015**	**UCCMW-16-022016**	**UCCMW-16-052016**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	3/24/2015	7/17/2015	10/20/2015	2/1/2016	5/3/2016
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	4.3 U	2.7 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16
	Sample ID	**UCCMW-16-052014**	**UCCMW-16-062014**	**UCCMW-16-082014**	**UCCMW-16-092014**	**UCCMW-16-122014**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/13/2014	6/5/2014	8/14/2014	9/18/2014	12/17/2014
Conventionals						
Nitrate	µg/L	1700				
Sulfate	µg/L	16000				
Total Organic Carbon	µg/L	1000 U				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2	1
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.25 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	0.63				
Ethene	µg/L	0.5 U				
Methane	µg/L	2.5				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.29 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.4 U	15 U	1 U	1 U	6.2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.26 U	0.51 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.26	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-16
	Sample ID	**UCCMW-16-052014**	**UCCMW-16-062014**	**UCCMW-16-082014**	**UCCMW-16-092014**	**UCCMW-16-122014**
	Depth	9-19 ft	9-19 ft	9-19 ft	9-19 ft	9-19 ft
	Date	5/13/2014	6/5/2014	8/14/2014	9/18/2014	12/17/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.27 U	0.2 U	0.28 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.4 U	2.7 U	1 U	1.6 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-17	UCCMW-17
	Sample ID	**UCCMW-16-08201**	**UCCMW-16-11201**	**UCCMW-16-03201**	**CMW-17-Dup-052**	**UCCMW-17-05201**
	Depth	9-19 ft	9-19 ft	9-19 ft	10-20 ft	10-20 ft
	Date	8/11/2016	11/14/2016	3/13/2017	5/11/2014	5/11/2014
Conventionals						
Nitrate	µg/L	2200		3100	3100	3100
Sulfate	µg/L	18000		14000	10000	11000
Total Organic Carbon	µg/L	1000		1200	1000 U	1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.22	0.86	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	0.5 U		0.5 U	0.53	0.5 U
Ethene	µg/L	0.5 U		0.5 U	0.5 U	0.5 U
Methane	µg/L	0.5 U		19	1.7	1.5
Dissolved Metals						
Sodium	µg/L			10000		
Total Metals						
Sodium	µg/L	12000		10000		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.31 U	0.31 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1.4 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	3.2 U	2.6 U	2 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-16	UCCMW-16	UCCMW-16	UCCMW-17	UCCMW-17
	Sample ID	**JCCMW-16-08201**	**JCCMW-16-11201**	**JCCMW-16-03201**	**CMW-17-Dup-052**	**JCCMW-17-05201**
	Depth	9-19 ft	9-19 ft	9-19 ft	10-20 ft	10-20 ft
	Date	8/11/2016	11/14/2016	3/13/2017	5/11/2014	5/11/2014
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.7 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.25 U	0.28 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

Location		UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17
Sample ID		**JCCMW-17-06201**	**JCCMW-17-08201**	**JCCMW-17-09201**	**JCCMW-17-12201**	**JCCMW-17-03201**
Depth		10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
Date		6/5/2014	8/14/2014	9/17/2014	12/17/2014	3/24/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	9.3	0.2 U
Tetrachloroethene	µg/L	0.36	0.21	0.7	24	0.95
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.31	0.2 U
Trichloroethene	µg/L	0.2 U	0.25 U	0.2 U	3.2	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	15 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.26 U	0.51 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	2.7 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17
	Sample ID	**UCCMW-17-062014**	**UCCMW-17-082014**	**UCCMW-17-092014**	**UCCMW-17-122014**	**UCCMW-17-032015**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	6/5/2014	8/14/2014	9/17/2014	12/17/2014	3/24/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17
	Sample ID	**UCCMW-17-072015**	**UCCMW-17-102015**	**UCCMW-17-012016**	**UCCMW-17-052016**	**UCCMW-17-082016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	7/17/2015	10/20/2015	1/28/2016	5/3/2016	8/11/2016
Conventionals						
Nitrate	µg/L			3200		1800
Sulfate	µg/L			17000		19000
Total Organic Carbon	µg/L			1100		1000
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.69	0.35	0.2 U	12	0.78
Tetrachloroethene	µg/L	0.49	0.52	0.51	4.9	0.81
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.22	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L			0.5 U		0.5 U
Ethene	µg/L			0.5 U		0.5 U
Methane	µg/L			10		0.5 U
Dissolved Metals						
Sodium	µg/L			9400		
Total Metals						
Sodium	µg/L			9100		17000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.39 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.36 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	2.3 U	1 U	1.3 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.27 U	0.37 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-17
	Sample ID	**UCCMW-17-07201**	**UCCMW-17-10201**	**UCCMW-17-01201**	**UCCMW-17-05201**	**UCCMW-17-08201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	7/17/2015	10/20/2015	1/28/2016	5/3/2016	8/11/2016
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.25 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.4 U	2.7 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	2 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-18	UCCMW-18
	Sample ID	**JCCMW-17-11201**	**JCCMW-17-03201**	**JCCMW-17-03112**	**JCCMW-18-08201**	**JCCMW-18-09201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	11/10/2016	3/13/2017	3/11/2020	8/19/2014	9/17/2014
BTEX						
Benzene	µg/L			0.2 U		
Ethylbenzene	µg/L			0.2 U		
Toluene	µg/L			1 U		
Xylene (meta & para)	µg/L			0.4 U		
Xylene (ortho)	µg/L			0.2 U		
Xylene (total)	µg/L			0.4 U		
Conventionals						
Dissolved Oxygen	mg/L			3.9		
Nitrate	µg/L		3600			
ORP	mV			149.8		
pH	pH			6.09		
Sulfate	µg/L		30000			
Total Organic Carbon	µg/L		7000			
Turbidity	ntu			3.08		
cVOCs						
cis-1,2-Dichloroethene	µg/L	44	250	26	0.2 U	0.2 U
Tetrachloroethene	µg/L	35	16	21	5.8	1.7
trans-1,2-Dichloroethene	µg/L	0.32	2 U	0.21	0.2 U	0.2 U
Trichloroethene	µg/L	3.6	3.4	1.2	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	7	0.02 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		5.2 U	0.22 UJ		
Ethene	µg/L		1.5	0.29 UJ		
Methane	µg/L		450	0.55 UJ		
Dissolved Metals						
Sodium	µg/L		30000			
SVOCs						
Naphthalene	µg/L			1 U		
Total Metals						
Arsenic	µg/L			3.3 U		
Sodium	µg/L		31000			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L			0.2 U		
1,2-Dibromo-3-chloropropane	µg/L	1.3 U	10 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	2 U	0.02 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-18	UCCMW-18
	Sample ID	UCCMW-17-11201	UCCMW-17-03201	UCCMW-17-03112	UCCMW-18-08201	UCCMW-18-09201
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	11/10/2016	3/13/2017	3/11/2020	8/19/2014	9/17/2014
VOCs						
1,2-Dichlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L			0.2 U		
1,3-Dichlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	3.4 U	26 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L			2 U		
4-Chlorotoluene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L			5 U		
Bromobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	10 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	2 U	0.2 U	0.28 U	0.2 U
Carbon disulfide	µg/L			0.2 U		
Carbon tetrachloride	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	10 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.25
Chloromethane	µg/L	1.5 U	10 U	1 U	1.6 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L			0.2 U		
Dibromochloromethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	2 U	0.2 U	0.33 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	2 U	1 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	10 U	1.5 U	1 U	1 U
iso-Propylbenzene	µg/L			0.2 U		
Methyl ethyl ketone	µg/L			5 U		
Methyl iso butyl ketone	µg/L			2 U		
Methylene chloride	µg/L	1 U	10 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L			0.2 U		
n-Butylbenzene	µg/L			0.2 U		
n-Propylbenzene	µg/L			0.2 U		
sec-Butylbenzene	µg/L			0.2 U		
Styrene	µg/L			0.2 U		
tert-Butylbenzene	µg/L			0.2 U		
trans-1,3-Dichloropropene	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L			1 U		

Table B.1
Historical Groundwater Data within Study Area

Location	UCCMW-17	UCCMW-17	UCCMW-17	UCCMW-18	UCCMW-18
Sample ID	**UCCMW-17-11201**	**UCCMW-17-03201**	**UCCMW-17-03112**	**UCCMW-18-08201**	**UCCMW-18-09201**
Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
Date	11/10/2016	3/13/2017	3/11/2020	8/19/2014	9/17/2014

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18
	Sample ID	**UCCMW-18-05201**	**UCCMW-18-08201**	**UCCMW-18-11201**	**UCCMW-18-03201**	**UCCMW-18-03112**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	5/3/2016	8/12/2016	11/10/2016	3/13/2017	3/11/2020
BTEX						
Benzene	µg/L					1 U
Ethylbenzene	µg/L					1 U
Toluene	µg/L					5 U
Xylene (meta & para)	µg/L					2 U
Xylene (ortho)	µg/L					1 U
Xylene (total)	µg/L					2 U
Conventionals						
Nitrate	µg/L	2000	1900	2500	350	
Sulfate	µg/L	20000 U	10000	10000 U	25000 U	
Total Organic Carbon	µg/L	67000	13000	46000	59000	
cVOCs						
cis-1,2-Dichloroethene	µg/L	390	4.4	15	39	19
Tetrachloroethene	µg/L	2 U	0.85	42	4.1	130
trans-1,2-Dichloroethene	µg/L	4.7	0.31	2.8	2.4	1 U
Trichloroethene	µg/L	2 U	0.2 U	2	1.7	
Vinyl chloride	µg/L	240	4.6	8.7	14	2.8
Dissolved Gases						
Ethane	µg/L	67 U	94 U	130 U	120 U	0.22 UJ
Ethene	µg/L	240	8.7	78	43	2.3 J
Methane	µg/L	5500	12000	11000	14000	
Dissolved Metals						
Sodium	µg/L			22000	40000	
SVOCs						
Naphthalene	µg/L					5 U
Total Metals						
Arsenic	µg/L					6
Sodium	µg/L	20000	12000	21000	44000	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1,1-Trichloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1,2-Trichloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1-Dichloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1-Dichloroethene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,1-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2,3-Trichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2,3-Trichloropropane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2,4-Trichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2,4-Trimethylbenzene	µg/L					1 U
1,2-Dibromo-3-chloropropane	µg/L	13 U	1 U	1.3 U	2 U	5 U
1,2-Dibromoethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	0.1 U
1,2-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2-Dichloroethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,2-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,3,5-Trimethylbenzene	µg/L					1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18
	Sample ID	**JCCMW-18-05201**	**JCCMW-18-08201**	**JCCMW-18-11201**	**JCCMW-18-03201**	**JCCMW-18-03112**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	5/3/2016	8/12/2016	11/10/2016	3/13/2017	3/11/2020
VOCs						
1,3-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,3-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
1,4-Dichlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
2,2-Dichloropropane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
2-Chloroethyl vinyl ether	µg/L	13 U	1 U	3.4 U	5.2 U	5 U
2-Chlorotoluene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
2-Hexanone	µg/L					10 U
4-Chlorotoluene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Acetone	µg/L					25 U
Bromobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Bromochloromethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Bromodichloromethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Bromoform	µg/L	10 U	1 U	1 U	2 U	5 U
Bromomethane	µg/L	3.7 U	0.2 U	0.2 U	0.4 U	1 U
Carbon disulfide	µg/L					1 U
Carbon tetrachloride	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Chlorobenzene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Chloroethane	µg/L	10 U	1 U	1 U	2 U	5 U
Chloroform	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Chloromethane	µg/L	10 U	1 U	1.5 U	2 U	5 U
cis-1,3-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Cymene	µg/L					1 U
Dibromochloromethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Dibromomethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Dichlorodifluoromethane	µg/L	2 U	0.25 U	0.2 U	0.4 U	1 U
Hexachlorobutadiene	µg/L	2 U	0.2 U	0.2 U	0.4 U	5 U
Iodomethane	µg/L	27 U	1 U	1 U	2 U	7.5 U
iso-Propylbenzene	µg/L					1 U
Methyl ethyl ketone	µg/L					25 U
Methyl iso butyl ketone	µg/L					10 U
Methylene chloride	µg/L	20 U	1 U	1 U	2 U	5 U
Methyl-Tert-Butyl Ether	µg/L					1 U
n-Butylbenzene	µg/L					1 U
n-Propylbenzene	µg/L					1 U
sec-Butylbenzene	µg/L					1 U
Styrene	µg/L					1 U
tert-Butylbenzene	µg/L					1 U
trans-1,3-Dichloropropene	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Trichlorofluoromethane	µg/L	2 U	0.2 U	0.2 U	0.4 U	1 U
Vinyl acetate	µg/L					5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18
	Sample ID	**JCCMW-18-12201**	**JCCMW-18-03201**	**JCCMW-18-07201**	**JCCMW-18-10201**	**JCCMW-18-01201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	12/17/2014	3/24/2015	7/22/2015	10/20/2015	1/28/2016
Conventionals						
Nitrate	µg/L		50 U	290	1200	1100
Sulfate	µg/L		5000 U	75000	13000	10000 U
Total Organic Carbon	µg/L		670000	31000	21000	250000
cVOCs						
cis-1,2-Dichloroethene	µg/L	170	15	22	100	1200
Tetrachloroethene	µg/L	1500	850	1.4	1.2	5 U
trans-1,2-Dichloroethene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Trichloroethene	µg/L	55	9	0.35	1 U	5 U
Vinyl chloride	µg/L	10 U	4 U	0.6	3.4	280
Dissolved Gases						
Ethane	µg/L		8.5	15 U	250 U	110 U
Ethene	µg/L		10	1 U	0.5 U	85
Methane	µg/L		19	210	4000	12000
Dissolved Metals						
Sodium	µg/L			28000	18000	28000
Total Metals						
Sodium	µg/L		170000	29000	19000	27000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1,1-Trichloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1,2-Trichloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1-Dichloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1-Dichloroethene	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,1-Dichloropropene	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,2,3-Trichlorobenzene	µg/L	10 U	4 U	0.33 U	1 U	5 U
1,2,3-Trichloropropane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,2,4-Trichlorobenzene	µg/L	10 U	4 U	0.34 U	1 U	5 U
1,2-Dibromo-3-chloropropane	µg/L	50 U	20 U	1 U	5 U	25 U
1,2-Dibromoethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,2-Dichlorobenzene	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,2-Dichloroethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,2-Dichloropropane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,3-Dichlorobenzene	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,3-Dichloropropane	µg/L	10 U	4 U	0.2 U	1 U	5 U
1,4-Dichlorobenzene	µg/L	10 U	4 U	0.2 U	1 U	5 U
2,2-Dichloropropane	µg/L	10 U	4 U	0.2 U	1 U	5 U
2-Chloroethyl vinyl ether	µg/L	50 U	68 U	3 U	12 U	25 U
2-Chlorotoluene	µg/L	10 U	4 U	0.2 U	1 U	5 U
4-Chlorotoluene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Bromobenzene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Bromochloromethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
Bromodichloromethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
Bromoform	µg/L	50 U	20 U	1 U	5 U	25 U
Bromomethane	µg/L	10 U	4 U	0.2 U	1 U	6.8 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18	UCCMW-18
	Sample ID	**UCCMW-18-122014**	**UCCMW-18-032015**	**UCCMW-18-072015**	**UCCMW-18-102015**	**UCCMW-18-012016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	12/17/2014	3/24/2015	7/22/2015	10/20/2015	1/28/2016
VOCs						
Carbon tetrachloride	µg/L	10 U	4 U	0.2 U	1 U	5 U
Chlorobenzene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Chloroethane	µg/L	50 U	20 U	1 U	5 U	25 U
Chloroform	µg/L	10 U	4 U	0.2 U	1 U	5 U
Chloromethane	µg/L	50 U	20 U	1 U	5 U	25 U
cis-1,3-Dichloropropene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Dibromochloromethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
Dibromomethane	µg/L	10 U	4 U	0.2 U	1 U	5 U
Dichlorodifluoromethane	µg/L	10 U	4 U	0.28 U	1 U	5 U
Hexachlorobutadiene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Iodomethane	µg/L	50 U	20 U	1 U	5 U	35 U
Methylene chloride	µg/L	50 U	20 U	1 U	5 U	25 U
trans-1,3-Dichloropropene	µg/L	10 U	4 U	0.2 U	1 U	5 U
Trichlorofluoromethane	µg/L	10 U	4 U	0.2 U	1 U	5 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19
	Sample ID	**UCCMW-99-031120**	**UCCMW-19 -05201**	**UCCMW-19-062014**	**UCCMW-19-082014**	**UCCMW-19-092014**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	3/11/2020	5/12/2014	6/5/2014	8/19/2014	9/16/2014
Conventionals						
Dissolved Oxygen	mg/L	0.55				
Nitrate	µg/L		3600			
ORP	mV	-48.3				
pH	pH	6.21				
Sulfate	µg/L		17000			
Total Organic Carbon	µg/L		1000 U			
Turbidity	ntu	5.7				
cVOCs						
cis-1,2-Dichloroethene	µg/L		32	130	60	11
Tetrachloroethene	µg/L		62	260	1100	400
trans-1,2-Dichloroethene	µg/L		0.4 U	2 U	11	2.2
Trichloroethene	µg/L	1.9	10	41	33	9.1
Vinyl chloride	µg/L		0.4 U	2 U	5 U	0.2 U
Dissolved Gases						
Ethane	µg/L		3.3			
Ethene	µg/L		1.7			
Methane	µg/L	1400 J	15			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,1,1-Trichloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,1,2-Trichloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,1-Dichloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,1-Dichloroethene	µg/L		0.4 U	2 U	5 U	0.2 U
1,1-Dichloropropene	µg/L		0.4 U	2 U	5 U	0.2 U
1,2,3-Trichlorobenzene	µg/L		0.54 U	2 U	5 U	0.2 U
1,2,3-Trichloropropane	µg/L		0.4 U	2 U	5 U	0.2 U
1,2,4-Trichlorobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L		2 U	10 U	25 U	1 U
1,2-Dibromoethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,2-Dichlorobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
1,2-Dichloroethane	µg/L		0.4 U	2 U	5 U	0.2 U
1,2-Dichloropropane	µg/L		0.4 U	2 U	5 U	0.2 U
1,3-Dichlorobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
1,3-Dichloropropane	µg/L		0.4 U	2 U	5 U	0.2 U
1,4-Dichlorobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
2,2-Dichloropropane	µg/L		0.4 U	2 U	5 U	0.2 U
2-Chloroethyl vinyl ether	µg/L		2 U	150 U	25 U	1 U
2-Chlorotoluene	µg/L		0.4 U	2 U	5 U	0.2 U
4-Chlorotoluene	µg/L		0.4 U	2 U	5 U	0.2 U
Bromobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
Bromochloromethane	µg/L		0.4 U	2 U	5 U	0.2 U
Bromodichloromethane	µg/L		0.4 U	2 U	5 U	0.2 U
Bromoform	µg/L		2 U	10 U	25 U	1 U
Bromomethane	µg/L		0.4 U	2.6 U	7 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-18	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19
	Sample ID	**UCCMW-99-031120**	**UCCMW-19 -05201**	**UCCMW-19-062014**	**UCCMW-19-082014**	**UCCMW-19-092014**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	3/11/2020	5/12/2014	6/5/2014	8/19/2014	9/16/2014
VOCs						
Carbon tetrachloride	µg/L		0.4 U	2 U	5 U	0.2 U
Chlorobenzene	µg/L		0.4 U	2 U	5 U	0.2 U
Chloroethane	µg/L		2 U	10 U	25 U	4.1
Chloroform	µg/L		0.4 U	2 U	5 U	0.41
Chloromethane	µg/L		2 U	10 U	40 U	1
cis-1,3-Dichloropropene	µg/L		0.4 U	2 U	5 U	0.2 U
Dibromochloromethane	µg/L		0.4 U	2 U	5 U	0.2 U
Dibromomethane	µg/L		0.4 U	2 U	5 U	0.2 U
Dichlorodifluoromethane	µg/L		0.4 U	2 U	8.3 U	0.2 U
Hexachlorobutadiene	µg/L		0.4 U	2 U	5 U	0.2 U
Iodomethane	µg/L		2 U	14 U	25 U	1 U
Methylene chloride	µg/L		2 U	10 U	25 U	1 U
trans-1,3-Dichloropropene	µg/L		0.4 U	2 U	5 U	0.2 U
Trichlorofluoromethane	µg/L		0.4 U	2 U	5 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-20
	Sample ID	**UCCMW-19-052016**	**UCCMW-19-082016**	**UCCMW-19-112016**	**UCCMW-19-032017**	**UCCMW-20-052014**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	8-18 ft
	Date	5/4/2016	8/12/2016	11/10/2016	3/9/2017	5/15/2014
Conventionals						
Nitrate	µg/L	140	55	50 U	110	2100
Sulfate	µg/L	25000 U	6800	10000 U	25000 U	11000
Total Organic Carbon	µg/L	200000	38000	31000	18000	1000
cVOCs						
cis-1,2-Dichloroethene	µg/L	850	240	29	3.3	6.8
Tetrachloroethene	µg/L	4 U	2 U	0.2 U	0.6	43
trans-1,2-Dichloroethene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	4 U	2 U	0.2 U	0.48	5.9
Vinyl chloride	µg/L	13	2.6	19	0.65	0.2 U
Dissolved Gases						
Ethane	µg/L	67 U	150 U	85 U	35 U	0.5 U
Ethene	µg/L	1.3	12 U	6.7 U	5.5 U	0.5 U
Methane	µg/L	9500	8600	5700	4100	0.5 U
Dissolved Metals						
Sodium	µg/L			20000	19000	
Total Metals						
Sodium	µg/L	85000	24000	18000	19000	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.31 U
1,2,3-Trichloropropane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	26 U	10 U	1.3 U	1 U	1 U
1,2-Dibromoethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	26 U	10 U	3.4 U	1.6 U	1 U
2-Chlorotoluene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	20 U	10 U	1 U	1 U	1 U
Bromomethane	µg/L	7.4 U	3.4 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-20
	Sample ID	**JCCMW-19-05201**	**JCCMW-19-08201**	**JCCMW-19-11201**	**JCCMW-19-03201**	**JCCMW-20-05201**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	8-18 ft
	Date	5/4/2016	8/12/2016	11/10/2016	3/9/2017	5/15/2014
VOCs						
Carbon tetrachloride	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	20 U	10 U	1 U	1 U	1 U
Chloroform	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	20 U	13 U	1.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	4 U	2.7 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	54 U	18 U	1 U	1 U	1 U
Methylene chloride	µg/L	40 U	10 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	4 U	2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19
	Sample ID	**UCCMW-19-122014**	**UCCMW-19-042015**	**UCCMW-19-072015**	**UCCMW-19-102015**	**UCCMW-19-012016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	12/19/2014	4/2/2015	7/22/2015	10/21/2015	1/28/2016
Conventionals						
Nitrate	µg/L		760	50 U	78	54
Sulfate	µg/L		5600	17000	10000	5000 U
Total Organic Carbon	µg/L		490000	15000	65000	120000
cVOCs						
cis-1,2-Dichloroethene	µg/L	24	5.5	24	37	16
Tetrachloroethene	µg/L	290	120	1.9	0.2 U	4.2
trans-1,2-Dichloroethene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	12	6.3	0.64	0.2 U	1.2
Vinyl chloride	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		0.5 U	2.9	5 U	6.2 U
Ethene	µg/L		0.7	2	0.5 U	0.8 U
Methane	µg/L		0.5 U	6.9	65	330
Dissolved Metals						
Sodium	µg/L			25000	20000	39000
Total Metals						
Sodium	µg/L		22000	27000	20000	36000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	2 U	0.4 U	0.33 U	0.29 U	0.2 U
1,2,3-Trichloropropane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	2 U	0.4 U	0.34 U	0.25 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	10 U	2 U	1 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	10 U	2 U	3 U	2.7 U	1 U
2-Chlorotoluene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	10 U	2 U	1 U	1 U	1 U
Bromomethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.27 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19	UCCMW-19
	Sample ID	**UCCMW-19-122014**	**UCCMW-19-042015**	**UCCMW-19-072015**	**UCCMW-19-102015**	**UCCMW-19-012016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	12/19/2014	4/2/2015	7/22/2015	10/21/2015	1/28/2016
VOCs						
Carbon tetrachloride	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	10 U	2 U	1 U	1 U	1 U
Chloroform	µg/L	2 U	2.8	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	10 U	2 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	2 U	0.62 U	0.28 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	10 U	2 U	1 U	1 U	1.4 U
Methylene chloride	µg/L	10 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	2 U	0.4 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-2	UCCMW-2	UCCMW-2	UCCMW-2	UCCMW-2
	Sample ID	**HWA-MW-2-1111**	**UCCMW-2-052014**	**UCCMW-2-062014**	**UCCMW-2-082014**	**UCCMW-2-092014**
	Depth	3.5-13.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	3.5-13.5 ft
	Date	11/18/2011	5/11/2014	6/2/2014	8/13/2014	9/15/2014
Conventionals						
Nitrate	µg/L		8000			
Sulfate	µg/L		36000			
Total Organic Carbon	µg/L		4900			
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.94	0.2 U	0.26	0.2 U	0.22
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.25 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		0.5 U			
Ethene	µg/L		0.5 U			
Methane	µg/L		20			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.31 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	2 U	4.9 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.51 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-2	UCCMW-2	UCCMW-2	UCCMW-2	UCCMW-2
	Sample ID	**HWA-MW-2-1111**	**UCCMW-2-052014**	**UCCMW-2-062014**	**UCCMW-2-082014**	**UCCMW-2-092014**
	Depth	3.5-13.5 ft	4.5-14.5 ft	4.5-14.5 ft	4.5-14.5 ft	3.5-13.5 ft
	Date	11/18/2011	5/11/2014	6/2/2014	8/13/2014	9/15/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1 U	1.5 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.28 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.3 U	2.7 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20
	Sample ID	**JCCMW-20-062014**	**JCCMW-20-082014**	**JCCMW-20-092014**	**JCCMW-20-122014**	**JCCMW-20-042015**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/3/2014	8/14/2014	9/16/2014	12/11/2014	4/2/2015
Conventionals						
Nitrate	µg/L					4800
Sulfate	µg/L					28000
Total Organic Carbon	µg/L					1900
cVOCs						
cis-1,2-Dichloroethene	µg/L	6.1	6.6	9.5	32	9.2
Tetrachloroethene	µg/L	48	48	64	160	71
trans-1,2-Dichloroethene	µg/L	0.2 U	1.4	0.4 U	1 U	0.4 U
Trichloroethene	µg/L	6.7	4.2	7.4	16	7.5
Vinyl chloride	µg/L	0.2 U	0.2 U	0.4 U	0.1 U	0.4 U
Dissolved Gases						
Ethane	µg/L					0.5 U
Ethene	µg/L					0.5 U
Methane	µg/L					0.5 U
Total Metals						
Sodium	µg/L					11000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	2 U	5 U	2 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
2-Chloroethyl vinyl ether	µg/L	4.9 U	1 U	2 U	100 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Bromoform	µg/L	1 U	1 U	2 U	5 U	2 U
Bromomethane	µg/L	0.2 U	0.51 U	0.4 U	1 U	0.4 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20
	Sample ID	**UCCMW-20-062014**	**UCCMW-20-082014**	**UCCMW-20-092014**	**UCCMW-20-122014**	**UCCMW-20-042015**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/3/2014	8/14/2014	9/16/2014	12/11/2014	4/2/2015
VOCs						
Chloroethane	µg/L	1 U	1 U	2 U	5 U	2 U
Chloroform	µg/L	0.44	0.69	0.4 U	1 U	0.4 U
Chloromethane	µg/L	1 U	1.5 U	2 U	5 U	2 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.4 U	1.4 U	0.62 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Iodomethane	µg/L	1.3 U	2.7 U	2 U	19 U	2 U
Methylene chloride	µg/L	1 U	1 U	2 U	5 U	2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.4 U	1 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20
	Sample ID	UCCMW-20-072015	UCCMW-20-102015	UCCMW-20-012016	UCCMW-20-052016	UCCMW-20-082016
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	7/9/2015	10/26/2015	1/29/2016	5/5/2016	8/11/2016
Conventionals						
Nitrate	µg/L	55	76	1500	2300	1300
Sulfate	µg/L	5000 U	5000	23000	19000	24000
Total Organic Carbon	µg/L	88000	11000	2700	2100	2400
cVOCs						
cis-1,2-Dichloroethene	µg/L	53	56	43	63	26
Tetrachloroethene	µg/L	31	8.6	18	23	16
trans-1,2-Dichloroethene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Trichloroethene	µg/L	5.8	2.6	2.7	8.3	3.2
Vinyl chloride	µg/L	0.96	0.4 U	0.2 U	0.4 U	0.2 U
Dissolved Gases						
Ethane	µg/L	4.3	5.6	0.5 U	0.5 U	0.5 U
Ethene	µg/L	6.1	0.5 U	0.5 U	0.5 U	0.5 U
Methane	µg/L	5.4	37	1.8	0.78	1.3
Dissolved Metals						
Sodium	µg/L	22000	26000	15000		
Total Metals						
Sodium	µg/L	23000	25000	16000	16000	12000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1-Dichloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1-Dichloroethene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,1-Dichloropropene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.52 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	2 U	1 U	2.6 U	1 U
1,2-Dibromoethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2-Dichloroethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,2-Dichloropropane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,3-Dichloropropane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
2,2-Dichloropropane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4 U	4.8 U	1 U	2.6 U	1 U
2-Chlorotoluene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
4-Chlorotoluene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Bromobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Bromochloromethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Bromodichloromethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Bromoform	µg/L	2 U	2 U	1 U	2 U	1 U
Bromomethane	µg/L	0.4 U	0.4 U	0.27 U	0.74 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20	UCCMW-20
	Sample ID	**JCCMW-20-072015**	**JCCMW-20-102015**	**JCCMW-20-012016**	**JCCMW-20-052016**	**JCCMW-20-08201(**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	7/9/2015	10/26/2015	1/29/2016	5/5/2016	8/11/2016
VOCs						
Carbon tetrachloride	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Chlorobenzene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Chloroethane	µg/L	2 U	2 U	1 U	2 U	1 U
Chloroform	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Chloromethane	µg/L	2 U	2 U	1 U	2 U	1 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Dibromochloromethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Dibromomethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Dichlorodifluoromethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.25 U
Hexachlorobutadiene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Iodomethane	µg/L	2 U	2 U	1.4 U	5.4 U	1 U
Methylene chloride	µg/L	2 U	2 U	1 U	4 U	1 U
trans-1,3-Dichloropropene	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U
Trichlorofluoromethane	µg/L	0.4 U	0.4 U	0.2 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**JCCMW-20-11201**	**JCCMW-20-03201**	**JCCMW-21-05201**	**JCCMW-21-06201**	**JCCMW-21-08201**
	Depth	8-18 ft	8-18 ft	12-22 ft	12-22 ft	12-22 ft
	Date	11/29/2016	3/8/2017	5/15/2014	6/3/2014	8/14/2014
Conventionals						
Nitrate	µg/L	1500	2500	1300		
Sulfate	µg/L	19000	89000	49000		
Total Organic Carbon	µg/L	2100	2500	3000		
cVOCs						
cis-1,2-Dichloroethene	µg/L	2.3	0.57	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	6.1	5	13	16	19
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.88	0.64	0.2 U	0.34	0.49
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U	1.4		
Ethene	µg/L	0.5 U	0.5 U	1		
Methane	µg/L	3	0.98	5.4		
Dissolved Metals						
Sodium	µg/L	9700	19000			
Total Metals						
Sodium	µg/L	9700	19000			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	1.9 U	1 U	4.9 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.51 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-20	UCCMW-20	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**UCCMW-20-112016**	**UCCMW-20-032017**	**UCCMW-21-052014**	**UCCMW-21-062014**	**UCCMW-21-082014**
	Depth	8-18 ft	8-18 ft	12-22 ft	12-22 ft	12-22 ft
	Date	11/29/2016	3/8/2017	5/15/2014	6/3/2014	8/14/2014
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.35	0.2 U	0.22
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1.5 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.28 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1.3 U	2.7 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**UCCMW-21-012016**	**UCCMW-21-052016**	**UCCMW-21-082016**	**UCCMW-21-112016**	**UCCMW-21-032017**
	Depth	12-22 ft	12-22 ft	12-22 ft	12-22 ft	12-22 ft
	Date	1/29/2016	5/5/2016	8/11/2016	11/29/2016	3/8/2017
Conventionals						
Nitrate	µg/L	2900	2900	210	160	100
Sulfate	µg/L	16000	26000	18000	12000	12000
Total Organic Carbon	µg/L	1900	3300	19000	13000	5500
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.3	0.25	2.3	9.5	5.6
Tetrachloroethene	µg/L	25	24	20	7.8	5.4
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.69	0.48	0.35	0.7	0.77
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.68
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U	10 U	1.2 U	15 U
Ethene	µg/L	0.5 U	0.5 U	0.98 U	0.5 U	1.4 U
Methane	µg/L	9.7	0.5 U	810	53	1100
Dissolved Metals						
Sodium	µg/L	13000			17000	21000
Total Metals						
Sodium	µg/L	13000	15000	26000	17000	21000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1.3 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1.3 U	1 U	2 U	1.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.37 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**UCCMW-21-012016**	**UCCMW-21-052016**	**UCCMW-21-082016**	**UCCMW-21-112016**	**UCCMW-21-032017**
	Depth	12-22 ft	12-22 ft	12-22 ft	12-22 ft	12-22 ft
	Date	1/29/2016	5/5/2016	8/11/2016	11/29/2016	3/8/2017
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.25 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	2.7 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-22	UCCMW-22	UCCMW-22	UCCMW-23
	Sample ID	UCCMW-21-031020	UCCMW-22-062014	UCCMW-22-082014	UCCMW-22-092014	UCCMW-23-052014
	Depth	12-22 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/9/2020	6/3/2014	8/14/2014	9/18/2014	5/13/2014
BTEX						
Benzene	µg/L	0.2 U				
Ethylbenzene	µg/L	0.2 U				
Toluene	µg/L	1 U				
Xylene (meta & para)	µg/L	0.4 U				
Xylene (ortho)	µg/L	0.2 U				
Xylene (total)	µg/L	0.4 U				
Conventionals						
Dissolved Oxygen	mg/L	0.34				
Nitrate	µg/L					380
ORP	mV	1.3				
pH	pH	6.18				
Sulfate	µg/L					10000
Total Organic Carbon	µg/L					1900
Turbidity	ntu	7.87				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.61	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	2.8	0.81	0.67	0.89	2.2
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	1.4	0.2 U	0.25 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.25	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L					3.9
Ethene	µg/L					2
Methane	µg/L					34
SVOCs						
Naphthalene	µg/L	1 U				
Total Metals						
Arsenic	µg/L	5.5				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.29 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.02 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-22	UCCMW-22	UCCMW-22	UCCMW-23
	Sample ID	**JCCMW-21-03102**	**JCCMW-22-06201**	**JCCMW-22-08201**	**JCCMW-22-09201**	**JCCMW-23-05201**
	Depth	12-22 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/9/2020	6/3/2014	8/14/2014	9/18/2014	5/13/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L	0.2 U				
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	4.9 U	1 U	1 U	1.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L	2 U				
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L	5 U				
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.51 U	0.2 U	0.2 U
Carbon disulfide	µg/L	0.2 U				
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.28 U	0.2 U	0.27 U
Hexachlorobutadiene	µg/L	1 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.5 U	1.3 U	2.7 U	1 U	1 U
iso-Propylbenzene	µg/L	0.2 U				
Methyl ethyl ketone	µg/L	5 U				
Methyl iso butyl ketone	µg/L	2 U				
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L	0.2 U				
n-Butylbenzene	µg/L	0.2 U				
n-Propylbenzene	µg/L	0.2 U				
sec-Butylbenzene	µg/L	0.2 U				
Styrene	µg/L	0.2 U				
tert-Butylbenzene	µg/L	0.2 U				
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L	1 U				

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**UCCMW-21-092014**	**UCCMW-21-122014**	**UCCMW-21-042015**	**UCCMW-21-072015**	**UCCMW-21-102015**
	Depth	12-22 ft	12-22 ft	12-22 ft	12-22 ft	12-22 ft
	Date	9/16/2014	12/11/2014	4/2/2015	7/9/2015	10/26/2015
Conventionals						
Nitrate	µg/L			3600	3000	2500
Sulfate	µg/L			31000	100000	45000
Total Organic Carbon	µg/L			6100	6500	4300
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.26	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	29	28	28	13	13
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	1.2	1	0.82	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L			0.5 U	0.5 U	0.5 U
Ethene	µg/L			0.5 U	0.5 U	0.5 U
Methane	µg/L			0.5 U	0.65	2.3
Dissolved Metals						
Sodium	µg/L				25000	21000
Total Metals						
Sodium	µg/L			9700	26000	22000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.26 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	20 U	1 U	1 U	2.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21	UCCMW-21
	Sample ID	**UCCMW-21-092014**	**UCCMW-21-122014**	**UCCMW-21-042015**	**UCCMW-21-072015**	**UCCMW-21-102015**
	Depth	12-22 ft	12-22 ft	12-22 ft	12-22 ft	12-22 ft
	Date	9/16/2014	12/11/2014	4/2/2015	7/9/2015	10/26/2015
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.39	0.23	0.27	0.53	0.3
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	3.7 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23
	Sample ID	UCCMW-23-032015	UCCMW-23-072015	UCCMW-23-022016	UCCMW-23-082016	UCCMW-23-032017
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/30/2015	7/17/2015	2/1/2016	8/12/2016	3/9/2017
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	2.9	3.4	4.1	4.3	4.1
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.39 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.36 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1.3 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	2 U	2.3 U	1 U	1.6 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.58 U	0.34 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1.3 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.27 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	4.3 U	1.8 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23
	Sample ID	**UCCMW-23-032015**	**UCCMW-23-072015**	**UCCMW-23-022016**	**UCCMW-23-082016**	**UCCMW-23-032017**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/30/2015	7/17/2015	2/1/2016	8/12/2016	3/9/2017
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23
	Sample ID	**UCCMW-23-062014**	**UCCMW-23-062014**	**UCCMW-23-082014**	**UCCMW-23-092014**	**UCCMW-23-122014**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/5/2014	6/6/2014	8/20/2014	9/16/2014	12/17/2014
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	2.1	2.1	2.5	2.5	4.6
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	15 U	15 U	1 U	1 U	6.2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.26 U	0.26 U	0.28 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1.6 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.33 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	1.4 U	1 U	1 U	1.6 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23	UCCMW-23
	Sample ID	**JCCMW-23-062014**	**JCCMW-23-062014**	**JCCMW-23-082014**	**JCCMW-23-092014**	**JCCMW-23-122014**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	6/5/2014	6/6/2014	8/20/2014	9/16/2014	12/17/2014
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-25	UCCMW-25	UCCMW-25
	Sample ID	**UCCMW-24-032017**	**UCCMW-24-03092**	**UCCMW-25-05201**	**UCCMW-25-06201**	**UCCMW-25-08201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/7/2017	3/9/2020	5/15/2014	6/3/2014	8/14/2014
BTEX						
Benzene	µg/L		0.2 U			
Ethylbenzene	µg/L		0.2 U			
Toluene	µg/L		1 U			
Xylene (meta & para)	µg/L		0.4 U			
Xylene (ortho)	µg/L		0.2 U			
Xylene (total)	µg/L		0.4 U			
Conventionals						
Dissolved Oxygen	mg/L		0.48			
Nitrate	µg/L			3900		
ORP	mV		20.9			
pH	pH		6.36			
Sulfate	µg/L			24000		
Total Organic Carbon	µg/L			1000 U		
Turbidity	ntu		8.42			
cVOCs						
cis-1,2-Dichloroethene	µg/L	1.2	0.3	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1	0.2 U	6.9	9.3	9.3
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.97	0.2 U	0.2 U	0.2 U	0.25 U
Vinyl chloride	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		0.22 UJ	0.5 U		
Ethene	µg/L		0.29 UJ	0.5 U		
Methane	µg/L		1100 J	0.5 U		
SVOCs						
Naphthalene	µg/L		1 U			
Total Metals						
Arsenic	µg/L		11			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.29 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U			
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-25	UCCMW-25	UCCMW-25
	Sample ID	**JCCMW-24-032017**	**JCCMW-24-03092**	**JCCMW-25-05201**	**JCCMW-25-06201**	**JCCMW-25-08201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	3/7/2017	3/9/2020	5/15/2014	6/3/2014	8/14/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L		0.2 U			
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.9 U	1 U	1 U	4.9 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U			
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U			
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	1 U	0.2 U	0.2 U	0.51 U
Carbon disulfide	µg/L		0.26 U			
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.33	0.44	0.62
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1.5 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U			
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.28 U
Hexachlorobutadiene	µg/L	0.2 U	1 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	2.1 U	1 U	1.3 U	2.7 U
iso-Propylbenzene	µg/L		0.2 U			
Methyl ethyl ketone	µg/L		5 U			
Methyl iso butyl ketone	µg/L		2 U			
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U			
n-Butylbenzene	µg/L		0.2 U			
n-Propylbenzene	µg/L		0.2 U			
sec-Butylbenzene	µg/L		0.2 U			
Styrene	µg/L		0.2 U			
tert-Butylbenzene	µg/L		0.2 U			
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		1 U			

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24
	Sample ID	**UCCMW-24-042015**	**UCCMW-24-072015**	**UCCMW-24-012016**	**UCCMW-24-032016**	**UCCMW-24-082016**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	4/2/2015	7/9/2015	1/29/2016	3/7/2016	8/11/2016
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	1.2	0.9
Tetrachloroethene	µg/L	2.3	2.6	3.2	1	2.8
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.97	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.26 U	0.2 U		0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U		1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U		1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Bromoform	µg/L	1 U	1 U	1 U		1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.27 U		0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Chloroethane	µg/L	1 U	1 U	1 U		1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Chloromethane	µg/L	1 U	1 U	1 U		1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Dichlorodifluoromethane	µg/L	0.31 U	0.2 U	0.2 U		0.25 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Iodomethane	µg/L	1 U	1 U	1.4 U		1 U
Methylene chloride	µg/L	1 U	1 U	1 U		1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24
	Sample ID	**UCCMW-24-042015**	**UCCMW-24-072015**	**UCCMW-24-012016**	**UCCMW-24-032016**	**UCCMW-24-082016**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	4/2/2015	7/9/2015	1/29/2016	3/7/2016	8/11/2016
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U		0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U		0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24
	Sample ID	**UCCMW-24-052014**	**UCCMW-24-062014**	**UCCMW-24-082014**	**UCCMW-24-092014**	**UCCMW-24-122014**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	5/15/2014	6/3/2014	8/14/2014	9/18/2014	12/11/2014
Conventionals						
Nitrate	µg/L	2600				
Sulfate	µg/L	18000				
Total Organic Carbon	µg/L	1700				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	2.2	2.2	2.5	2.4	2.4
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	1.2				
Ethene	µg/L	0.71				
Methane	µg/L	3.9				
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.31 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	4.9 U	1 U	1 U	20 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.4 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	1.3	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24	UCCMW-24
	Sample ID	**UCCMW-24-052014**	**UCCMW-24-062014**	**UCCMW-24-082014**	**UCCMW-24-092014**	**UCCMW-24-122014**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	5/15/2014	6/3/2014	8/14/2014	9/18/2014	12/11/2014
VOCs						
Chloromethane	µg/L	1 U	1 U	1.5 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.2 U	0.28 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.3 U	1.7 U	1 U	3.7 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25
	Sample ID	UCCMW-25-01201	UCCMW-25-05201	UCCMW-25-08201	UCCMW-25-11201	UCCMW-25-03201
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	1/29/2016	5/5/2016	8/11/2016	11/29/2016	3/7/2017
Conventionals						
Nitrate	µg/L	4400	1800	320	50 U	50 U
Sulfate	µg/L	14000	21000	5000 U	10000 U	5000 U
Total Organic Carbon	µg/L	2300	2300	130000	6200	14000
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	3.9	2.6	12
Tetrachloroethene	µg/L	10	7.8	11	8.1	5.6
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.73	1.9	1
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.9
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U	18 U	32 U	90 U
Ethene	µg/L	0.5 U	0.5 U	6.3	1.8 U	11 U
Methane	µg/L	1.4	0.84	1500	1400	11000
Dissolved Metals						
Sodium	µg/L	31000			33000	42000
Total Metals						
Sodium	µg/L	29000	32000	59000	32000	45000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1.3 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1.3 U	1 U	2 U	1.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.37 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25
	Sample ID	**UCCMW-25-01201**	**UCCMW-25-05201**	**UCCMW-25-08201**	**UCCMW-25-11201**	**UCCMW-25-03201**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	1/29/2016	5/5/2016	8/11/2016	11/29/2016	3/7/2017
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.25 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	2.7 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	2 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

		UCCMW-25	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26
	Location	UCCMW-25	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26
	Sample ID	**UCCMW-25-03092**	**UCCMW-26-032015**	**UCCMW-26-072015**	**UCCMW-26-102015**	**UCCMW-26-022016**
	Depth	8-18 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/9/2020	3/23/2015	7/30/2015	10/21/2015	2/1/2016
BTEX						
Benzene	µg/L	0.2 U				
Ethylbenzene	µg/L	0.2 U				
Toluene	µg/L	1 U				
Xylene (meta & para)	µg/L	0.4 U				
Xylene (ortho)	µg/L	0.2 U				
Xylene (total)	µg/L	0.4 U				
Conventionals						
Dissolved Oxygen	mg/L	0.34				
Nitrate	µg/L		140	54	180	77
ORP	mV	-35.4				
pH	pH	6.37				
Sulfate	µg/L		5000 U	5000 U	5000	5000 U
Total Organic Carbon	µg/L		200000	42000	26000	61000
Turbidity	ntu	56.67				
cVOCs						
cis-1,2-Dichloroethene	µg/L	3.8	21	130	69	0.98
Tetrachloroethene	µg/L	1.1	81	2.2	1.5	0.47
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Trichloroethene	µg/L	0.88	10	1.5	1.1	0.22
Vinyl chloride	µg/L	0.75	0.74	3.3	10	0.35
Dissolved Gases						
Ethane	µg/L	0.22 UJ	0.86	1000 U	1000 U	110 U
Ethene	µg/L	0.29 UJ	0.82	20 U	5 U	14 U
Methane	µg/L	8300 J	2100	12000	21000	11000
Dissolved Metals						
Sodium	µg/L			18000	19000	95000
SVOCs						
Naphthalene	µg/L	1 U				
Total Metals						
Arsenic	µg/L	17				
Sodium	µg/L		30000	18000	18000	110000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.58 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.29 U	0.2 U	1 U	0.4 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.5 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U				
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	5 U	2.6 U	1.3 U
1,2-Dibromoethane	µg/L	0.02 U	0.2 U	1 U	0.4 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

Location		UCCMW-25	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26
Sample ID		UCCMW-25-03092	UCCMW-26-03201	UCCMW-26-07201	UCCMW-26-10201	UCCMW-26-02201
Depth		8-18 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
Date		3/9/2020	3/23/2015	7/30/2015	10/21/2015	2/1/2016
VOCs						
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,3,5-Trimethylbenzene	µg/L	0.2 U				
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	3.4 U	5 U	5.4 U	2.3 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
2-Hexanone	µg/L	2 U				
4-Chlorotoluene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Acetone	µg/L	5 U				
Bromobenzene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Bromoform	µg/L	1 U	1 U	5 U	2 U	1 U
Bromomethane	µg/L	1 U	0.2 U	1 U	0.4 U	0.58 U
Carbon disulfide	µg/L	0.26 U				
Carbon tetrachloride	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Chloroethane	µg/L	1 U	1 U	5 U	2 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Chloromethane	µg/L	1 U	1 U	6.5 U	2 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Cymene	µg/L	0.2 U				
Dibromochloromethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Hexachlorobutadiene	µg/L	1 U	0.2 U	1 U	0.4 U	0.2 U
Iodomethane	µg/L	2.1 U	1 U	5 U	2 U	4.3 U
iso-Propylbenzene	µg/L	0.2 U				
Methyl ethyl ketone	µg/L	5 U				
Methyl iso butyl ketone	µg/L	2 U				
Methylene chloride	µg/L	1 U	1 U	6.5 U	2 U	1 U
Methyl-Tert-Butyl Ether	µg/L	0.2 U				
n-Butylbenzene	µg/L	0.2 U				
n-Propylbenzene	µg/L	0.2 U				
sec-Butylbenzene	µg/L	0.2 U				
Styrene	µg/L	0.2 U				
tert-Butylbenzene	µg/L	0.2 U				
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	1 U	0.4 U	0.2 U
Vinyl acetate	µg/L	1 U				

Table B.1
Historical Groundwater Data within Study Area

Location	UCCMW-25	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26
Sample ID	**JCCMW-25-03092**	**JCCMW-26-03201**	**JCCMW-26-07201**	**JCCMW-26-10201**	**JCCMW-26-02201**
Depth	8-18 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
Date	3/9/2020	3/23/2015	7/30/2015	10/21/2015	2/1/2016

Table B.1
Historical Groundwater Data within Study Area

Location		UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25
Sample ID		**UCCMW-25-092014**	**UCCMW-25-122014**	**UCCMW-25-042015**	**UCCMW-25-072015**	**UCCMW-25-102015**
Depth		8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
Date		9/18/2014	12/11/2014	4/2/2015	7/9/2015	10/26/2015
Conventionals						
Nitrate	µg/L			2400	50 U	1800
Sulfate	µg/L			67000	110000	23000
Total Organic Carbon	µg/L			12000	11000	3700
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	8.3	7.5	9.4	6.7	9.6
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L			0.5 U	0.5 U	0.5 U
Ethene	µg/L			0.5 U	0.5 U	0.5 U
Methane	µg/L			0.5 U	0.5 U	0.84
Dissolved Metals						
Sodium	µg/L				13000	28000
Total Metals						
Sodium	µg/L			15000	14000	28000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.26 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	20 U	1 U	1 U	2.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25	UCCMW-25
	Sample ID	**UCCMW-25-092014**	**UCCMW-25-122014**	**UCCMW-25-042015**	**UCCMW-25-072015**	**UCCMW-25-102015**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	9/18/2014	12/11/2014	4/2/2015	7/9/2015	10/26/2015
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.38	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.28 U	0.31 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	3.7 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-27
	Sample ID	**UCCMW-26-05201**	**UCCMW-26-08201**	**UCCMW-26-11201**	**UCCMW-26-03201**	**UCCMW-27-03201**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/5/2016	8/10/2016	11/11/2016	3/13/2017	3/23/2015
Conventionals						
Nitrate	µg/L	100	150	60	50 U	
Sulfate	µg/L	5000 U	10000 U	5000 U	25000 U	
Total Organic Carbon	µg/L	70000	28000	42000	27000	
cVOCs						
cis-1,2-Dichloroethene	µg/L	8.9	0.85	0.95	2.4	0.2 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	3.8
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.3	0.2 U
Trichloroethene	µg/L	0.21	0.2 U	0.2 U	0.4	0.2 U
Vinyl chloride	µg/L	4.1	0.52	0.38	0.94	0.2 U
Dissolved Gases						
Ethane	µg/L	120 U	130 U	160 U	95 U	
Ethene	µg/L	7.9 U	20 U	6.1	9.8 U	
Methane	µg/L	10000	11000	12000	11000	
Dissolved Metals						
Sodium	µg/L			68000	46000	
Total Metals						
Sodium	µg/L	45000	41000	68000	51000	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1.3 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.3 U	1.9 U	3.8 U	2.6 U	3.4 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.37 U	0.29 U	0.26 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-26	UCCMW-27
	Sample ID	**UCCMW-26-052016**	**UCCMW-26-082016**	**UCCMW-26-112016**	**UCCMW-26-032017**	**UCCMW-27-032015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/5/2016	8/10/2016	11/11/2016	3/13/2017	3/23/2015
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1.9 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	2.7 U	2.2 U	1.9 U	1 U	1 U
Methylene chloride	µg/L	2 U	3 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

Location		UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-27
Sample ID		UCCMW-27-072015	UCCMW-27-102015	UCCMW-27-012016	UCCMW-27-052016	UCCMW-27-082016
Depth		5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
Date		7/17/2015	10/22/2015	1/27/2016	5/5/2016	8/10/2016
Conventionals						
Nitrate	µg/L				540	
Sulfate	µg/L				47000	
Total Organic Carbon	µg/L				8500	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.27	0.54	0.2 U	0.22	0.48
Tetrachloroethene	µg/L	19	6.6	0.72	16	6.3
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.48	0.53	0.2 U	0.49	0.55
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				8.4 U	
Ethene	µg/L				0.89 U	
Methane	µg/L				730	
Total Metals						
Sodium	µg/L				23000	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.39 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.36 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2 U	2 U	1 U	1.3 U	1.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.27 U	0.37 U	0.29 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-27
	Sample ID	**JCCMW-27-07201**	**JCCMW-27-10201**	**JCCMW-27-01201**	**JCCMW-27-05201**	**JCCMW-27-08201**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	7/17/2015	10/22/2015	1/27/2016	5/5/2016	8/10/2016
VOCs						
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.6 U	1.4 U	2.7 U	2.2 U
Methylene chloride	µg/L	1 U	1 U	1 U	2 U	3 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-28D	UCCMW-29
	Sample ID	**UCCMW-27-112016**	**UCCMW-27-032017**	**UCCMW-27-03092**	**CCMW-28D-08042**	**UCCMW-29-07132**
	Depth	5-15 ft	5-15 ft	5-15 ft	40-50 ft	5-15 ft
	Date	11/11/2016	3/13/2017	3/9/2020	8/4/2020	7/13/2020
BTEX						
Benzene	µg/L			0.2 U	0.2 U	0.2 U
Ethylbenzene	µg/L			0.2 U	0.2 U	0.2 U
Toluene	µg/L			1 U	1 U	1 U
Xylene (meta & para)	µg/L			0.4 U	0.4 U	0.4 U
Xylene (ortho)	µg/L			0.2 U	0.2 U	0.2 U
Xylene (total)	µg/L			0.4 U	0.4 U	0.4 U
Conventionals						
Dissolved Oxygen	mg/L			0.76	0.5	7.29
Nitrate	µg/L	50 U				
ORP	mV			-54.7	138.2	118.7
pH	pH			6.42	5.96	6.55
Sulfate	µg/L	18000				
Total Organic Carbon	µg/L	8300				
Turbidity	ntu			8.44	9.88	9.74
cVOCs						
cis-1,2-Dichloroethene	µg/L	1.2	1.1	3.1	0.2 U	0.2 U
Tetrachloroethene	µg/L	4	1.1	0.2 U	0.2 U	9.2
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	1.5	0.87	0.21	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.094	0.02 U	0.02 U
Dissolved Gases						
Ethane	µg/L	50 U		0.22 UJ	0.29	0.22 U
Ethene	µg/L	2.2 U		0.29 UJ	0.29 U	0.29 U
Methane	µg/L	3600		2700 J	1.2	83
Dissolved Metals						
Sodium	µg/L	31000				
SVOCs						
Naphthalene	µg/L			1 U	1 U	1 U
Total Metals						
Arsenic	µg/L			8.8	3.3 U	3.3 U
Sodium	µg/L	31000				
TPHs						
Diesel Range Organics	µg/L			210 U		
Gasoline Range Organics	µg/L			100 U		
Oil Range Organics	µg/L			250		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.29 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-28D	UCCMW-29
	Sample ID	**UCCMW-27-11201**	**UCCMW-27-03201**	**UCCMW-27-03092**	**UCCMW-28D-08042**	**UCCMW-29-07132**
	Depth	5-15 ft	5-15 ft	5-15 ft	40-50 ft	5-15 ft
	Date	11/11/2016	3/13/2017	3/9/2020	8/4/2020	7/13/2020
VOCs						
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L			0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.02 U	0.02 U	0.02 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L			0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	3.8 U	2.6 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L			2 U	2 U	2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L			5 U	5 U	5 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.26 U	0.2 U	1 U	0.2 U	0.2 U
Carbon disulfide	µg/L			0.26 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1.9 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L			0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	1 U	1 U	1 U
Iodomethane	µg/L	1.9 U	1 U	2.1 U	1.6 U	2.1 U
iso-Propylbenzene	µg/L			0.2 U	0.2 U	0.2 U
Methyl ethyl ketone	µg/L			5 U	5 U	5 U
Methyl iso butyl ketone	µg/L			2 U	2 U	2 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L			0.2 U	0.2 U	0.2 U
n-Butylbenzene	µg/L			0.2 U	0.2 U	0.2 U
n-Propylbenzene	µg/L			0.2 U	0.2 U	0.2 U
sec-Butylbenzene	µg/L			0.2 U	0.2 U	0.2 U
Styrene	µg/L			0.2 U	0.2 U	0.2 U
tert-Butylbenzene	µg/L			0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-27	UCCMW-27	UCCMW-27	UCCMW-28D	UCCMW-29
	Sample ID	**JCCMW-27-11201(**	**JCCMW-27-032017**	**JCCMW-27-03092(**	**CCMW-28D-08042**	**JCCMW-29-07132(**
	Depth	5-15 ft	5-15 ft	5-15 ft	40-50 ft	5-15 ft
	Date	11/11/2016	3/13/2017	3/9/2020	8/4/2020	7/13/2020
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L			1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-29D	UCCMW-30D	UCCMW-31D	UCCMW-32	UCCMW-32D
	Sample ID	**CCMW-29D-07132**	**CCMW-30D-07142**	**CCMW-31D-07132**	**UCCMW-32-07132(**	**CCMW-32D-07132**
	Depth	34-44 ft	26-36 ft	18-28 ft	15-25 ft	30-40 ft
	Date	7/13/2020	7/14/2020	7/13/2020	7/13/2020	7/13/2020
BTEX						
Benzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	µg/L	1 U	1 U	1 U	1 U	1 U
Xylene (meta & para)	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Xylene (ortho)	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Xylene (total)	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Conventionals						
Dissolved Oxygen	mg/L	0.24	0.39	0.28	2.16	0.39
ORP	mV	-91.1	140	90.1	116.4	-75.5
pH	pH	7.61	5.84	6.21	6.58	6.7
Turbidity	ntu	25.68	6.95	15.98	47.05	2.9
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	6.6	3.2	0.2 U
Tetrachloroethene	µg/L	0.2 U	2.2	25	8.6	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	2.9	0.2 U
Vinyl chloride	µg/L	0.02 U	0.067	0.24	0.043	0.02 U
Dissolved Gases						
Ethane	µg/L	0.98	3.3 U	3.3 U	0.22 U	0.22 U
Ethene	µg/L	0.71	4.3 U	4.3 U	0.29 U	0.29 U
Methane	µg/L	410	1100	1200	32	5.9
Dissolved Metals						
Arsenic	µg/L	4.5			3 U	
SVOCs						
Naphthalene	µg/L	1 U	1 U	1 U	1 U	1 U
Total Metals						
Arsenic	µg/L	5.2	3.3 U	3.3 U	3.3 U	3.3 U
TPHs						
Diesel Range Organics	µg/L		210 U	210 U	210 U	210 U
Gasoline Range Organics	µg/L		100 U	100 U	110 U	100 U
Oil Range Organics	µg/L		210 U	210 U	210 U	210 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Table B.1
Historical Groundwater Data within Study Area

Location		UCCMW-29D	UCCMW-30D	UCCMW-31D	UCCMW-32	UCCMW-32D
Sample ID		**CCMW-29D-07132**	**CCMW-30D-07142**	**CCMW-31D-07132**	**JCCMW-32-07132(**	**CCMW-32D-07132**
Depth		34-44 ft	26-36 ft	18-28 ft	15-25 ft	30-40 ft
Date		7/13/2020	7/14/2020	7/13/2020	7/13/2020	7/13/2020
VOCs						
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L	5 U	5 U	5 U	5 U	5 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	µg/L	0.46 J	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	1 U	1 U	1 U	1 U	1 U
Iodomethane	µg/L	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
iso-Propylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methyl ethyl ketone	µg/L	5 U	5 U	5 U	5 U	5 U
Methyl iso butyl ketone	µg/L	2 U	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Styrene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

Location	UCCMW-29D	UCCMW-30D	UCCMW-31D	UCCMW-32	UCCMW-32D
Sample ID	**CCMW-29D-07132**	**CCMW-30D-07142**	**CCMW-31D-07132**	**JCCMW-32-07132(**	**CCMW-32D-07132**
Depth	34-44 ft	26-36 ft	18-28 ft	15-25 ft	30-40 ft
Date	7/13/2020	7/14/2020	7/13/2020	7/13/2020	7/13/2020

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-3	UCCMW-3	UCCMW-3	UCCMW-3R	UCCMW-3R
	Sample ID	**UCCMW-3-032002**	**HWA-MW-3-1111**	**UCCMW-3-082014**	**JCCMW-3R-05201**	**CMW-3R-DUP-062**
	Depth	3.5-13.5 ft	3.5-13.5 ft	3.5-13.5 ft	6-16 ft	6-16 ft
	Date	3/6/2002	11/18/2011	8/19/2014	5/10/2014	6/3/2014
Conventionals						
Nitrate	µg/L				9200	
Sulfate	µg/L				110000	
Total Organic Carbon	µg/L				2300	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.29	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	4.7	3.2	1.3	1.7	1.7
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	
Ethene	µg/L				0.5 U	
Methane	µg/L				0.5 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.31 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	2 U	4.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.28 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	0.2 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.44	1.2	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-3	UCCMW-3	UCCMW-3	UCCMW-3R	UCCMW-3R
	Sample ID	**UCCMW-3-032002**	**HWA-MW-3-1111**	**UCCMW-3-082014**	**JCCMW-3R-05201**	**CMW-3R-DUP-062**
	Depth	3.5-13.5 ft	3.5-13.5 ft	3.5-13.5 ft	6-16 ft	6-16 ft
	Date	3/6/2002	11/18/2011	8/19/2014	5/10/2014	6/3/2014
VOCs						
Chloromethane	µg/L	0.2 U	1 U	1.6 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.33 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-33D	UCCMW-34D	UCCMW-35D	UCCMW-36D	UCCMW-36D
	Sample ID	**CCMW-33D-07212**	**CCMW-34D-07212**	**CCMW-35D-07212**	**CCMW-36D-07132**	**JCCMW-99-07132(**
	Depth	49-59 ft	35-50 ft	30-40 ft	15-30 ft	15-30 ft
	Date	7/21/2020	7/21/2020	7/21/2020	7/13/2020	7/13/2020
BTEX						
Benzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Ethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Toluene	µg/L	1 U	1 U	1 U	1 U	
Xylene (meta & para)	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	
Xylene (ortho)	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Xylene (total)	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	
Conventionals						
Dissolved Oxygen	mg/L	0.33	2.02 JS	1.59	0.44	
ORP	mV	-118.7	57.5	-68.4	74.9	
pH	pH	7.43	6.18	6.72	6.17	
Turbidity	ntu	8.4	2.2	0	2.22	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U		20
Tetrachloroethene	µg/L	0.2 U	18	0.2 U	24	
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Vinyl chloride	µg/L	0.02 U	0.02 U	0.02 U	0.93	
Dissolved Gases						
Ethane	µg/L	2.2 U	6.7 U	0.22 U	2.2 U	
Ethene	µg/L	2.9 U	8.7 U	0.29 U	2.9 U	
Methane	µg/L	590	2600	6		860
SVOCs						
Naphthalene	µg/L	1 U	1 U	1 U	1 U	
Total Metals						
Arsenic	µg/L	5.8	3.3 U	3.3 U	3.3 U	
TPHs						
Diesel Range Organics	µg/L	210 U	210 U		210 U	
Gasoline Range Organics	µg/L	100 U	100 U		100 U	
Oil Range Organics	µg/L	210 U	210 U		210 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,2,3-Trichlorobenzene	µg/L	0.26 U	0.26 U	0.26 U	0.2 U	
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,2,4-Trimethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	
1,2-Dibromoethane	µg/L	0.02 U	0.02 U	0.02 U	0.02 U	
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-33D	UCCMW-34D	UCCMW-35D	UCCMW-36D	UCCMW-36D
	Sample ID	**CCMW-33D-07212**	**CCMW-34D-07212**	**CCMW-35D-07212**	**CCMW-36D-07132**	**JCCMW-99-07132(**
	Depth	49-59 ft	35-50 ft	30-40 ft	15-30 ft	15-30 ft
	Date	7/21/2020	7/21/2020	7/21/2020	7/13/2020	7/13/2020
VOCs						
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,3,5-Trimethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
2-Hexanone	µg/L	2 U	2 U	2 U	2 U	
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Acetone	µg/L	5 U	5 U	5 U	5 U	
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Bromoform	µg/L	1 U	1 U	1 U	1 U	
Bromomethane	µg/L	0.39 U	0.39 U	0.39 U	0.2 U	
Carbon disulfide	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Chloroethane	µg/L	1 U	1 U	1 U	1 U	
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Chloromethane	µg/L	1 U	1 U	1 U	1 U	
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Cymene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Hexachlorobutadiene	µg/L	1 U	1 U	1 U	1 U	
Iodomethane	µg/L	4.2 U	4.2 U	4.2 U	2.1 U	
iso-Propylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Methyl ethyl ketone	µg/L	5 U	5 U	5 U	5 U	
Methyl iso butyl ketone	µg/L	2 U	2 U	2 U	2 U	
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	
Methyl-Tert-Butyl Ether	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
n-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
n-Propylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
sec-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Styrene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
tert-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	
Vinyl acetate	µg/L	1 U	1 U	1 U	1 U	

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-3R	UCCMW-3R	UCCMW-3R	UCCMW-4D	UCCMW-4D
	Sample ID	JCCMW-3R-06201	JCCMW-3R-08201	JCCMW-3R-09201	UCCMW-4-032014	JCCMW-4D-05201
	Depth	6-16 ft	6-16 ft	6-16 ft	35-40 ft	35-40 ft
	Date	6/3/2014	8/19/2014	9/15/2014	3/13/2014	5/12/2014
Conventionals						
Nitrate	µg/L				50 U	50 U
Sulfate	µg/L				8100	5000 U
Total Organic Carbon	µg/L				1000 U	1000 U
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.6	1.3	1	0.88	0.2
trans-1,2-Dichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	0.5 U
Ethene	µg/L				0.5 U	0.5 U
Methane	µg/L				0.5 U	1.9
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.27 U
1,2,3-Trichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U		1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	4.9 U		1 U	1.9 U	1 U
2-Chlorotoluene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U		1 U	1 U	1 U
Bromomethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U		1 U	1 U	1 U
Chloroform	µg/L	0.2 U		0.2 U	0.52	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-3R	UCCMW-3R	UCCMW-3R	UCCMW-4D	UCCMW-4D
	Sample ID	UCCMW-3R-06201	UCCMW-3R-08201	UCCMW-3R-09201	UCCMW-4-032014	UCCMW-4D-05201
	Depth	6-16 ft	6-16 ft	6-16 ft	35-40 ft	35-40 ft
	Date	6/3/2014	8/19/2014	9/15/2014	3/13/2014	5/12/2014
VOCs						
Chloromethane	µg/L	1 U		1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.3 U		1 U	1 U	1 U
Methylene chloride	µg/L	1 U		1 U	1.3 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U		0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U		0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**UCCMW-4D-032017**	**UCCMW-4D-031120**	**UCCMW-5-052014**	**UCCMW-5-062014**	**UCCMW-5-082014**
	Depth	35-40 ft	35-40 ft	10-20 ft	10-20 ft	10-20 ft
	Date	3/9/2017	3/11/2020	5/13/2014	6/5/2014	8/20/2014
BTEX						
Benzene	µg/L		0.2 U			
Ethylbenzene	µg/L		0.2 U			
Toluene	µg/L		1 U			
Xylene (meta & para)	µg/L		0.4 U			
Xylene (ortho)	µg/L		0.2 U			
Xylene (total)	µg/L		0.4 U			
Conventionals						
Dissolved Oxygen	mg/L		0.65			
Nitrate	µg/L			770		
ORP	mV		-19.1			
pH	pH		7.01			
Sulfate	µg/L			9400		
Total Organic Carbon	µg/L			1700		
Turbidity	ntu		13.2			
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.3	0.21	0.44	0.22	0.2 U
Tetrachloroethene	µg/L	0.21	0.2 U	14	14	15
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.34	0.31	0.24
Vinyl chloride	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		0.22 UJ	0.5 U		
Ethene	µg/L		0.29 UJ	0.5 U		
Methane	µg/L		0.64 J	0.5 U		
SVOCs						
Naphthalene	µg/L		1 U			
Total Metals						
Arsenic	µg/L		9.1			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.29 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U			
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**JCCMW-4D-032017**	**JCCMW-4D-03112(**	**UCCMW-5-052014**	**UCCMW-5-062014**	**UCCMW-5-082014**
	Depth	35-40 ft	35-40 ft	10-20 ft	10-20 ft	10-20 ft
	Date	3/9/2017	3/11/2020	5/13/2014	6/5/2014	8/20/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L		0.2 U			
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.6 U	1 U	1.4 U	4.9 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U			
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U			
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.28 U
Carbon disulfide	µg/L		0.2 U			
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1.6 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U			
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.27 U	0.2 U	0.33 U
Hexachlorobutadiene	µg/L	0.2 U	1 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.5 U	1 U	1.3 U	1 U
iso-Propylbenzene	µg/L		0.2 U			
Methyl ethyl ketone	µg/L		5 U			
Methyl iso butyl ketone	µg/L		2 U			
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U			
n-Butylbenzene	µg/L		0.2 U			
n-Propylbenzene	µg/L		0.2 U			
sec-Butylbenzene	µg/L		0.2 U			
Styrene	µg/L		0.2 U			
tert-Butylbenzene	µg/L		0.2 U			
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		1 U			

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D
	Sample ID	**JCCMW-4D-04201**	**JCCMW-4D-07201**	**JCCMW-4D-10201**	**JCCMW-4D-01201**	**JCCMW-4D-08201**
	Depth	35-40 ft	35-40 ft	35-40 ft	35-40 ft	35-40 ft
	Date	4/2/2015	7/17/2015	10/21/2015	1/28/2016	8/12/2016
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	6.4	0.48	0.5	0.2 U	0.47
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.39 U	0.29 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.36 U	0.25 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1.3 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	2 U	2.7 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.27 U	0.34 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1.3 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.31 U	0.2 U	0.2 U	0.2 U	0.27 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1.4 U	1.8 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D
	Sample ID	**UCCMW-4D-042015**	**UCCMW-4D-072015**	**UCCMW-4D-102015**	**UCCMW-4D-012016**	**UCCMW-4D-082016**
	Depth	35-40 ft	35-40 ft	35-40 ft	35-40 ft	35-40 ft
	Date	4/2/2015	7/17/2015	10/21/2015	1/28/2016	8/12/2016
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D
	Sample ID	**JCCMW-4D-06201**	**JCCMW-4D-08201**	**MW-4D-Dup-0919**	**JCCMW-4D-12201**	**UCCMW-4-040215**
	Depth	35-40 ft	35-40 ft	35-40 ft	35-40 ft	35-40 ft
	Date	6/5/2014	8/19/2014	9/19/2014	12/17/2014	4/2/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.33	4.9	0.26	17	6.4
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.44	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1.5 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	15 U	1 U	1 U	1.4 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1.3 U	1 U	1 U
Bromomethane	µg/L	0.26 U	0.28 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.6 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.33 U	0.2 U	0.2 U	0.31 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D	UCCMW-4D
	Sample ID	**JCCMW-4D-06201**	**JCCMW-4D-08201**	**MW-4D-Dup-0919**	**JCCMW-4D-12201**	**UCCMW-4-040215**
	Depth	35-40 ft	35-40 ft	35-40 ft	35-40 ft	35-40 ft
	Date	6/5/2014	8/19/2014	9/19/2014	12/17/2014	4/2/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-6	UCCMW-6	UCCMW-6
	Sample ID	**UCCMW-5-032017**	**UCCMW-5-031020**	**UCCMW-6-032014**	**UCCMW-6-052014**	**UCCMW-6-062014**
	Depth	10-20 ft	10-20 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/9/2017	3/10/2020	3/13/2014	5/13/2014	6/6/2014
BTEX						
Benzene	µg/L		0.2 U			
Ethylbenzene	µg/L		0.2 U			
Toluene	µg/L		1 U			
Xylene (meta & para)	µg/L		0.4 U			
Xylene (ortho)	µg/L		0.2 U			
Xylene (total)	µg/L		0.4 U			
Conventionals						
Dissolved Oxygen	mg/L		9.44			
Nitrate	µg/L			390	1400	
ORP	mV		140.3			
pH	pH		6.19			
Sulfate	µg/L			17000	16000	
Total Organic Carbon	µg/L			1500	1000 U	
Turbidity	ntu		6.26			
cVOCs						
cis-1,2-Dichloroethene	µg/L	1.4	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	5	1.4	3.8	3.5	4
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.24	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L		0.22 UJ	0.5 U	0.5 U	
Ethene	µg/L		0.29 UJ	0.5 U	0.5 U	
Methane	µg/L		5.5 J	3.8	0.99	
SVOCs						
Naphthalene	µg/L		1 U			
Total Metals						
Arsenic	µg/L		3.3 U			
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.29 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L		0.2 U			
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-6	UCCMW-6	UCCMW-6
	Sample ID	**UCCMW-5-032017**	**UCCMW-5-031020**	**UCCMW-6-032014**	**UCCMW-6-052014**	**UCCMW-6-062014**
	Depth	10-20 ft	10-20 ft	5-15 ft	5-15 ft	5-15 ft
	Date	3/9/2017	3/10/2020	3/13/2014	5/13/2014	6/6/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L		0.2 U			
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1.6 U	1 U	1.9 U	1.4 U	15 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L		2 U			
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L		5 U			
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.26 U
Carbon disulfide	µg/L		0.2 U			
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L		0.2 U			
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.27 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	1 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.5 U	1 U	1 U	1.4 U
iso-Propylbenzene	µg/L		0.2 U			
Methyl ethyl ketone	µg/L		5 U			
Methyl iso butyl ketone	µg/L		2 U			
Methylene chloride	µg/L	1 U	1 U	1.3 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L		0.2 U			
n-Butylbenzene	µg/L		0.2 U			
n-Propylbenzene	µg/L		0.2 U			
sec-Butylbenzene	µg/L		0.2 U			
Styrene	µg/L		0.2 U			
tert-Butylbenzene	µg/L		0.2 U			
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L		1 U			

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**UCCMW-5-092014**	**UCCMW-5-122014**	**UCCMW-5-042015**	**UCCMW-5-040215**	**UCCMW-5-072015**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	9/16/2014	12/17/2014	4/2/2015	4/2/2015	7/17/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	13	14	8.5	8.5	19
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.27	0.29	0.2 U	0.2 U	0.5
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.39 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.36 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	6.2 U	1 U	1 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	3.8	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.51	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.31 U	0.31 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.6 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**UCCMW-5-092014**	**UCCMW-5-122014**	**UCCMW-5-042015**	**UCCMW-5-040215**	**UCCMW-5-072015**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	9/16/2014	12/17/2014	4/2/2015	4/2/2015	7/17/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**UCCMW-5-102015**	**UCCMW-5-012016**	**UCCMW-5-052016**	**UCCMW-5-082016**	**UCCMW-5-112016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	10/21/2015	1/27/2016	5/4/2016	8/10/2016	11/14/2016
Conventionals						
Nitrate	µg/L			180		310
Sulfate	µg/L			12000		11000
Total Organic Carbon	µg/L			2100		1500
cVOCs						
cis-1,2-Dichloroethene	µg/L	1.1	3.9	14	6.2	0.98
Tetrachloroethene	µg/L	19	5.8	14	14	6.3
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.7	0.21	0.54	0.61	0.23
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L			0.5 U		0.5 U
Ethene	µg/L			0.5 U		0.5 U
Methane	µg/L			0.71		0.58
Dissolved Metals						
Sodium	µg/L					10000
Total Metals						
Sodium	µg/L			20000		8800
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.29 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.25 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1.3 U	1 U	1.3 U	1 U	1.4 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2.7 U	1 U	1.3 U	1.9 U	3.2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.27 U	0.37 U	0.29 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5	UCCMW-5
	Sample ID	**UCCMW-5-102015**	**UCCMW-5-012016**	**UCCMW-5-052016**	**UCCMW-5-082016**	**UCCMW-5-112016**
	Depth	10-20 ft	10-20 ft	10-20 ft	10-20 ft	10-20 ft
	Date	10/21/2015	1/27/2016	5/4/2016	8/10/2016	11/14/2016
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1.7 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.28 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.4 U	2.7 U	2.2 U	1.5 U
Methylene chloride	µg/L	1 U	1 U	2 U	3 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-6-012016**	**UCCMW-6-082016**	**UCCMW-6-032017**	**UCCMW-7-052014**	**UCCMW-7-062014**
	Depth	5-15 ft	5-15 ft	5-15 ft	8-18 ft	8-18 ft
	Date	1/27/2016	8/12/2016	3/8/2017	5/15/2014	6/3/2014
Conventionals						
Nitrate	µg/L				2200	
Sulfate	µg/L				28000	
Total Organic Carbon	µg/L				1000 U	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	0.2 U	3.6	2.9	27	26
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	
Ethene	µg/L				0.5 U	
Methane	µg/L				0.5 U	
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.31 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1.6 U	1 U	4.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.34 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	1.2	1

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-6-012016**	**UCCMW-6-082016**	**UCCMW-6-032017**	**UCCMW-7-052014**	**UCCMW-7-062014**
	Depth	5-15 ft	5-15 ft	5-15 ft	8-18 ft	8-18 ft
	Date	1/27/2016	8/12/2016	3/8/2017	5/15/2014	6/3/2014
VOCs						
Chloromethane	µg/L	1 U	1.3 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.27 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1.4 U	1.8 U	1 U	1 U	1.3 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-6
	Sample ID	**UCCMW-6-082014**	**UCCMW-6-092014**	**UCCMW-6-122014**	**UCCMW-6-032015**	**UCCMW-6-072015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	8/20/2014	9/16/2014	12/17/2014	3/30/2015	7/9/2015
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	4.8	3.6	4	4.6	4.6
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.26 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	6.2 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.28 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1.6 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.33 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1.6 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-6	UCCMW-6
	Sample ID	**UCCMW-6-082014**	**UCCMW-6-092014**	**UCCMW-6-122014**	**UCCMW-6-032015**	**UCCMW-6-072015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	8/20/2014	9/16/2014	12/17/2014	3/30/2015	7/9/2015
VOCs						
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-7-072015**	**UCCMW-7-102015**	**UCCMW-7-022016**	**UCCMW-7-052016**	**UCCMW-7-082016**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	7/30/2015	10/21/2015	2/1/2016	5/5/2016	8/10/2016
Conventionals						
Nitrate	µg/L	3700	3100	3000	2800	50 U
Sulfate	µg/L	110000	65000	67000	110000	9400
Total Organic Carbon	µg/L	14000	7800	7100	9500	9500
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.35	3.9
Tetrachloroethene	µg/L	25	24	26	28	0.87
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.23
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	32
Ethene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	3.2
Methane	µg/L	0.5 U	0.5 U	25	0.5 U	2400
Dissolved Metals						
Sodium	µg/L	10000	11000	12000		
Total Metals						
Sodium	µg/L	10000	10000	12000	15000	14000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.29 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.25 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1.3 U	1.3 U	1.3 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	2.7 U	2.3 U	1.3 U	1.9 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.2 U	0.58 U	0.37 U	0.29 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-7-072015**	**UCCMW-7-102015**	**UCCMW-7-022016**	**UCCMW-7-052016**	**UCCMW-7-082016**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	7/30/2015	10/21/2015	2/1/2016	5/5/2016	8/10/2016
VOCs						
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.68	0.65	0.47	0.56	0.2 U
Chloromethane	µg/L	1.3 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	4.3 U	2.7 U	2.2 U
Methylene chloride	µg/L	1.3 U	1 U	1 U	2 U	3 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-7-082014**	**UCCMW-7-092014**	**UCCMW-7-122014**	**UCCMW-7-042015**	**UCCMW-7-040215**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	8/20/2014	9/19/2014	12/17/2014	4/2/2015	4/2/2015
Conventionals						
Nitrate	µg/L				3500	3500
Sulfate	µg/L				22000	22000
Total Organic Carbon	µg/L				4000	4000
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	µg/L	28	21	22	25	25
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L				0.5 U	0.5 U
Ethene	µg/L				0.5 U	0.5 U
Methane	µg/L				0.5 U	0.5 U
Total Metals						
Sodium	µg/L				10000	10000
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.28 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-7
	Sample ID	**UCCMW-7-082014**	**UCCMW-7-092014**	**UCCMW-7-122014**	**UCCMW-7-042015**	**UCCMW-7-040215**
	Depth	8-18 ft	8-18 ft	8-18 ft	8-18 ft	8-18 ft
	Date	8/20/2014	9/19/2014	12/17/2014	4/2/2015	4/2/2015
VOCs						
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	1	0.86	0.82	0.66	0.66
Chloromethane	µg/L	1.6 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.33 U	0.2 U	0.2 U	0.31 U	0.31 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-7-112016**	**UCCMW-7-032017**	**UCCMW-7-031020**	**UCCMW-8-052014**	**UCCMW-8-092014**
	Depth	8-18 ft	8-18 ft	8-18 ft	5-15 ft	5-15 ft
	Date	11/14/2016	3/7/2017	3/10/2020	5/29/2014	9/13/2014
BTEX						
Benzene	µg/L			0.2 U	1 U	1 U
Ethylbenzene	µg/L			0.2 U	1 U	1 U
Toluene	µg/L			1 U	1 U	1 U
Xylene (meta & para)	µg/L			0.4 U	1 U	1 U
Xylene (ortho)	µg/L			0.2 U	1 U	1 U
Xylene (total)	µg/L			0.4 U	2	1 U
Conventionals						
Dissolved Oxygen	mg/L			0.53		
Nitrate	µg/L	90	130		2300	
ORP	mV			-42.9		
pH	pH			6.23		
Sulfate	µg/L	23000	30000		18000	
Total Organic Carbon	µg/L	4000	6400		1000 U	
Turbidity	ntu			2.7		
cPAHs						
Benzo(a)anthracene	µg/L					0.02
Benzo(a)pyrene	µg/L					0.014
Benzo(b)fluoranthene	µg/L					0.016
Benzo(k)fluoranthene	µg/L					0.014
Chrysene	µg/L					0.015
cPAHs (MTCA TEQ-HalfND)	µg/L					0.02185
cPAHs (MTCA TEQ-ZeroND)	µg/L					0.02185
Dibenzo(a,h)anthracene	µg/L					0.013
Indeno(1,2,3-cd)pyrene	µg/L					0.014
cVOCs						
cis-1,2-Dichloroethene	µg/L	1.7	6.8	13	1 U	0.4 U
Tetrachloroethene	µg/L	9.9	14	1.4	110	76
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Trichloroethene	µg/L	2.4	4.6	1.3	1 U	0.57
Vinyl chloride	µg/L	0.3	0.35	1.9	1 U	0.4 U
Dissolved Gases						
Ethane	µg/L	14 U	21 U	0.22 UJ	0.5 U	
Ethene	µg/L	1.4 U	2.3 U	0.29 UJ	0.5 U	
Methane	µg/L	1200	2000	1000 J	0.5 U	
Dissolved Metals						
Arsenic	µg/L					3 U
Cadmium	µg/L					4 U
Chromium	µg/L					10 U
Lead	µg/L					1 U
Sodium	µg/L	15000	16000			
PBDEs						
PBDE-003	µg/L					1 U
SVOCs						
1,2-Diphenylhydrazine	µg/L					1 U
1-Methylnaphthalene	µg/L					0.1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-7-112016**	**UCCMW-7-032017**	**UCCMW-7-031020**	**UCCMW-8-052014**	**UCCMW-8-092014**
	Depth	8-18 ft	8-18 ft	8-18 ft	5-15 ft	5-15 ft
	Date	11/14/2016	3/7/2017	3/10/2020	5/29/2014	9/13/2014
SVOCs						
2,3,4,6-Tetrachlorophenol	µg/L					1 U
2,3,5,6-Tetrachlorophenol	µg/L					1 U
2,4,5-Trichlorophenol	µg/L					1 U
2,4,6-Trichlorophenol	µg/L					1 U
2,4-Dichlorophenol	µg/L					1 U
2,4-Dimethylphenol	µg/L					1 U
2,4-Dinitrophenol	µg/L					5 U
2-Chloronaphthalene	µg/L					1 U
2-Chlorophenol	µg/L					1 U
2-Methylnaphthalene	µg/L					0.1 U
2-Methylphenol	µg/L					1 U
2-Nitrophenol	µg/L					1 U
3- & 4-Methylphenol	µg/L					1 U
4,6-Dinitro-o-cresol	µg/L					5 U
4-Chloro-3-methylphenol	µg/L					1 U
4-Nitrophenol	µg/L					1 U
Acenaphthene	µg/L					0.1 U
Acenaphthylene	µg/L					0.1 U
Aniline	µg/L					5 U
Anthracene	µg/L					0.1 U
Benzidine	µg/L					5 U
Benzo(g,h,i)perylene	µg/L					0.016
Benzyl alcohol	µg/L					1 U
bis(2-chloroethoxy)methane	µg/L					1 U
bis(2-ethylhexyl)phthalate	µg/L					1 U
Butyl benzyl phthalate	µg/L					1 U
Carbazole	µg/L					1 U
Dibenzofuran	µg/L					1 U
Diethylphthalate	µg/L					1 U
Dimethyl phthalate	µg/L					1 U
Di-n-butyl phthalate	µg/L					1 U
Di-n-octyl phthalate	µg/L					1 U
Fluoranthene	µg/L					0.1 U
Fluorene	µg/L					0.1 U
Hexachlorocyclopentadiene	µg/L					1 U
Isophorone	µg/L					1 U
Naphthalene	µg/L			1 U		0.1 U
N-Nitrosodimethylamine	µg/L					1 U
N-Nitroso-di-n-propylamine	µg/L					1 U
N-Nitrosodiphenylamine	µg/L					1 U
o-Dinitrobenzene	µg/L					1 U
p-Dinitrobenzene	µg/L					1 U
Pentachlorophenol	µg/L					5 U
Phenanthrene	µg/L					0.1 U
Phenol	µg/L					1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-7-112016**	**UCCMW-7-032017**	**UCCMW-7-031020**	**UCCMW-8-052014**	**UCCMW-8-092014**
	Depth	8-18 ft	8-18 ft	8-18 ft	5-15 ft	5-15 ft
	Date	11/14/2016	3/7/2017	3/10/2020	5/29/2014	9/13/2014
SVOCs						
Pyrene	µg/L					0.1 U
Total Metals						
Arsenic	µg/L			9		
Sodium	µg/L	14000	16000			
TPHs						
Diesel Range Organics	µg/L				250 U	260 U
Gasoline Range Organics	µg/L				160	110
Oil Range Organics	µg/L				410 U	410 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	1.3 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,2,4-Trimethylbenzene	µg/L			0.2 U		
1,2-Dibromo-3-chloropropane	µg/L	1.4 U	1 U	1 U	5 U	2 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.02 U	1 U	0.4 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,3,5-Trimethylbenzene	µg/L			0.2 U		
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
2,3-Dichloroaniline	µg/L					1 U
2,4-Dinitrotoluene	µg/L					1 U
2,6-Dinitrotoluene	µg/L					1 U
2-Chloroethyl vinyl ether	µg/L	3.2 U	1.9 U	1 U	5 U	2 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
2-Hexanone	µg/L			2 U		
2-Nitroaniline	µg/L					1 U
3,3'-Dichlorobenzidine	µg/L					1 U
3-Nitroaniline	µg/L					1 U
4-Chloroaniline	µg/L					1 U
4-Chlorophenyl phenyl ether	µg/L					1 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
4-Nitroaniline	µg/L					1 U
Acetone	µg/L			5 U		
bis(2-chloroethyl)ether	µg/L					1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-7	UCCMW-7	UCCMW-7	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-7-112016**	**UCCMW-7-032017**	**UCCMW-7-031020**	**UCCMW-8-052014**	**UCCMW-8-092014**
	Depth	8-18 ft	8-18 ft	8-18 ft	5-15 ft	5-15 ft
	Date	11/14/2016	3/7/2017	3/10/2020	5/29/2014	9/13/2014
VOCs						
bis(2-chloroisopropyl)ether	µg/L					1 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Bromoform	µg/L	1 U	1 U	1 U	5 U	2 U
Bromomethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.62 U
Carbon disulfide	µg/L			0.2 U		
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Chloroethane	µg/L	1 U	1 U	1 U	5 U	2 U
Chloroform	µg/L	0.21	0.2 U	0.2 U	1 U	0.4 U
Chloromethane	µg/L	1.7 U	1 U	1 U	5 U	2 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Cymene	µg/L			0.2 U		
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Dichlorodifluoromethane	µg/L	0.28 U	0.2 U	0.2 U	1 U	0.4 U
Hexachlorobenzene	µg/L					1 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	1 U	1 U	0.4 U
Hexachloroethane	µg/L					1 U
Iodomethane	µg/L	1.5 U	1 U	1.5 U	5 U	3.6 U
iso-Propylbenzene	µg/L			0.2 U		
m-Dinitrobenzene	µg/L					1 U
Methyl ethyl ketone	µg/L			5 U		
Methyl iso butyl ketone	µg/L			2 U		
Methylene chloride	µg/L	1 U	1 U	1 U	5 U	2 U
Methyl-Tert-Butyl Ether	µg/L			0.2 U		
n-Butylbenzene	µg/L			0.2 U		
Nitrobenzene	µg/L					1 U
n-Propylbenzene	µg/L			0.2 U		
Pyridine	µg/L					1 U
sec-Butylbenzene	µg/L			0.2 U		
Styrene	µg/L			0.2 U		
tert-Butylbenzene	µg/L			0.2 U		
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.4 U
Vinyl acetate	µg/L			1 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-052016**	**UCCMW-8-082016**	**UCCMW-8-112016**	**UCCMW-8-032017**	**UCCMW-8-031120**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/5/2016	8/10/2016	11/11/2016	3/10/2017	3/11/2020
BTEX						
Benzene	µg/L					0.24
Ethylbenzene	µg/L					0.2 U
Toluene	µg/L					1 U
Xylene (meta & para)	µg/L					0.4 U
Xylene (ortho)	µg/L					0.2 U
Xylene (total)	µg/L					0.4 U
Conventionals						
Dissolved Oxygen	mg/L					0.62
Nitrate	µg/L	350	940	50 U	500	
ORP	mV					161.8
pH	pH					6.06
Sulfate	µg/L	19000	16000	22000	20000	
Total Organic Carbon	µg/L	31000	3800	4800	3100	
Turbidity	ntu					9.9
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.51	1	16	6.9	0.55
Tetrachloroethene	µg/L	96	1.3	1.7	10	2.2
trans-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.79	0.2 U	6.6	17	0.5
Vinyl chloride	µg/L	0.4 U	0.2 U	0.45	0.4	0.02 U
Dissolved Gases						
Ethane	µg/L	0.5 U	0.5 U	3.2 U	9.2 U	0.22 UJ
Ethene	µg/L	0.5 U	0.5 U	0.5 U	1.1 U	0.29 UJ
Methane	µg/L	4.1	15	160	570	33 J
Dissolved Metals						
Sodium	µg/L			13000	13000	
SVOCs						
Naphthalene	µg/L					1 U
Total Metals						
Arsenic	µg/L					3.8
Sodium	µg/L	16000	11000	13000	13000	
TPHs						
Diesel Range Organics	µg/L					220 U
Gasoline Range Organics	µg/L					100 U
Oil Range Organics	µg/L					300
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-052016**	**UCCMW-8-082016**	**UCCMW-8-112016**	**UCCMW-8-032017**	**UCCMW-8-031120**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/5/2016	8/10/2016	11/11/2016	3/10/2017	3/11/2020
VOCs						
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L					0.2 U
1,2-Dibromo-3-chloropropane	µg/L	2.6 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.02 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L					0.2 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	2.6 U	1.9 U	3.8 U	1.6 U	1 U
2-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L					2 U
4-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L					5 U
Bromobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	2 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.74 U	0.29 U	0.26 U	0.2 U	0.2 U
Carbon disulfide	µg/L					0.2 U
Carbon tetrachloride	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	2 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	2 U	1 U	1.9 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L					0.2 U
Dibromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	1 U
Iodomethane	µg/L	5.4 U	2.2 U	1.9 U	1 U	1.5 U
iso-Propylbenzene	µg/L					0.2 U
Methyl ethyl ketone	µg/L					5 U
Methyl iso butyl ketone	µg/L					2 U
Methylene chloride	µg/L	4 U	3 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L					0.2 U
n-Butylbenzene	µg/L					0.2 U
n-Propylbenzene	µg/L					0.2 U
sec-Butylbenzene	µg/L					0.2 U
Styrene	µg/L					0.2 U
tert-Butylbenzene	µg/L					0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-052016**	**UCCMW-8-082016**	**UCCMW-8-112016**	**UCCMW-8-032017**	**UCCMW-8-031120**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/5/2016	8/10/2016	11/11/2016	3/10/2017	3/11/2020
VOCs						
trans-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L					1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-122014**	**UCCMW-8-032015**	**UCCMW-8-072015**	**UCCMW-8-102015**	**UCCMW-8-022016**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/12/2014	3/23/2015	7/8/2015	10/21/2015	2/1/2016
BTEX						
Benzene	µg/L		1 U	1 U		
Ethylbenzene	µg/L		1 U	1 U		
Toluene	µg/L		1 U	1 U		
Xylene (meta & para)	µg/L		1 U	1 U		
Xylene (ortho)	µg/L		1 U	1 U		
Xylene (total)	µg/L		1 U	1 U		
Conventionals						
Nitrate	µg/L		240	970	710	2200
Sulfate	µg/L		6200	15000	16000	16000
Total Organic Carbon	µg/L		2700	1200	1800	1400
cPAHs						
Benzo(a)anthracene	µg/L		0.01 U	0.0094 U		
Benzo(a)pyrene	µg/L		0.01 U	0.0094 U		
Benzo(b)fluoranthene	µg/L		0.01 U	0.0094 U		
Benzo(k)fluoranthene	µg/L		0.01 U	0.0094 U		
Chrysene	µg/L		0.01 U	0.0094 U		
cPAHs (MTCA TEQ-HalfND)	µg/L		0.01 U	0.0094 U		
cPAHs (MTCA TEQ-ZeroND)	µg/L		0.01 U	0.0094 U		
Dibenzo(a,h)anthracene	µg/L		0.01 U	0.0094 U		
Indeno(1,2,3-cd)pyrene	µg/L		0.01 U	0.0094 U		
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	6	7.3	1
Tetrachloroethene	µg/L	83	49	42	36	75
trans-1,2-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Trichloroethene	µg/L	0.44	0.38	2.3	2.9	1.6
Vinyl chloride	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Dissolved Gases						
Ethane	µg/L		0.5 U	0.5 U	10 U	1.1 U
Ethene	µg/L		0.5 U	0.5 U	0.5 U	0.58 U
Methane	µg/L		48	0.5 U	110	65
Dissolved Metals						
Arsenic	µg/L		3 U	3 U		
Cadmium	µg/L		4 U	4 U		
Chromium	µg/L		10 U	10 U		
Lead	µg/L		1 U	1 U		
Sodium	µg/L			13000	12000	12000
PBDEs						
PBDE-003	µg/L		1 U	0.94 U		
SVOCs						
1,2-Diphenylhydrazine	µg/L		1 U	0.94 U		
1-Methylnaphthalene	µg/L		0.25 U	0.094 U		
2,3,4,6-Tetrachlorophenol	µg/L		1 U	0.94 U		
2,3,5,6-Tetrachlorophenol	µg/L		1 U	0.94 U		
2,4,5-Trichlorophenol	µg/L		1 U	0.94 U		
2,4,6-Trichlorophenol	µg/L		1 U	0.94 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-122014**	**UCCMW-8-032015**	**UCCMW-8-072015**	**UCCMW-8-102015**	**UCCMW-8-022016**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/12/2014	3/23/2015	7/8/2015	10/21/2015	2/1/2016
SVOCs						
2,4-Dichlorophenol	µg/L		1 U	0.94 U		
2,4-Dimethylphenol	µg/L		1 U	0.94 U		
2,4-Dinitrophenol	µg/L		5.1 U	4.7 U		
2-Chloronaphthalene	µg/L		1 U	0.94 U		
2-Chlorophenol	µg/L		1 U	0.94 U		
2-Methylnaphthalene	µg/L		0.25 U	0.094 U		
2-Methylphenol	µg/L		1 U	0.94 U		
2-Nitrophenol	µg/L		1 U	0.94 U		
3- & 4-Methylphenol	µg/L		1 U	0.94 U		
4,6-Dinitro-o-cresol	µg/L		5.1 U	4.7 U		
4-Chloro-3-methylphenol	µg/L		1 U	0.94 U		
4-Nitrophenol	µg/L		1 U	0.94 U		
Acenaphthene	µg/L		0.1 U	0.094 U		
Acenaphthylene	µg/L		0.1 U	0.094 U		
Aniline	µg/L		5.1 U	4.7 U		
Anthracene	µg/L		0.1 U	0.094 U		
Benzidine	µg/L		5.1 U	4.7 U		
Benzo(g,h,i)perylene	µg/L		0.01 U	0.0094 U		
Benzyl alcohol	µg/L		1 U	0.94 U		
bis(2-chloroethoxy)methane	µg/L		1 U	0.94 U		
bis(2-ethylhexyl)phthalate	µg/L		1 U	4.7 U		
Butyl benzyl phthalate	µg/L		1 U	0.94 U		
Carbazole	µg/L		1 U	0.94 U		
Dibenzofuran	µg/L		1 U	0.94 U		
Diethylphthalate	µg/L		1 U	0.94 U		
Dimethyl phthalate	µg/L		1 U	0.94 U		
Di-n-butyl phthalate	µg/L		1 U	0.94 U		
Di-n-octyl phthalate	µg/L		1 U	0.94 U		
Fluoranthene	µg/L		0.1 U	0.094 U		
Fluorene	µg/L		0.1 U	0.094 U		
Hexachlorocyclopentadiene	µg/L		1 U	0.94 U		
Isophorone	µg/L		1 U	0.94 U		
Naphthalene	µg/L		0.1 U	0.094 U		
N-Nitrosodimethylamine	µg/L		1 U	0.94 U		
N-Nitroso-di-n-propylamine	µg/L		1 U	0.94 U		
N-Nitrosodiphenylamine	µg/L		1 U	0.94 U		
o-Dinitrobenzene	µg/L		1 U	0.94 U		
p-Dinitrobenzene	µg/L		1 U	0.94 U		
Pentachlorophenol	µg/L		5.1 U	4.7 U		
Phenanthrene	µg/L		0.1 U	0.094 U		
Phenol	µg/L		1 U	0.94 U		
Pyrene	µg/L		0.1 U	0.094 U		
Total Metals						
Arsenic	µg/L		3.3 U	3.3 U		
Cadmium	µg/L		4.4 U	4.4 U		

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-122014**	**UCCMW-8-032015**	**UCCMW-8-072015**	**UCCMW-8-102015**	**UCCMW-8-022016**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/12/2014	3/23/2015	7/8/2015	10/21/2015	2/1/2016
Total Metals						
Chromium	µg/L		11 U	11 U		
Lead	µg/L		1.1 U	1.1 U		
Sodium	µg/L		5400	14000	12000	13000
TPHs						
Diesel Range Organics	µg/L		260 U	250 U		
Gasoline Range Organics	µg/L		100 U	100 U		
Oil Range Organics	µg/L		410 U	410 U		
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1,1-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1,2,2-Tetrachloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1,2-Trichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1-Dichloroethene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,1-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,2,3-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.29 U	0.4 U
1,2,3-Trichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.25 U	0.4 U
1,2-Dibromo-3-chloropropane	µg/L	2 U	1.3 U	1 U	1.3 U	2.6 U
1,2-Dibromoethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,2-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,2-Dichloroethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,3-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,3-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
1,4-Dichlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
2,2-Dichloropropane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
2,3-Dichloroaniline	µg/L		1 U	0.94 U		
2,4-Dinitrotoluene	µg/L		1 U	0.94 U		
2,6-Dinitrotoluene	µg/L		1 U	0.94 U		
2-Chloroethyl vinyl ether	µg/L	2.8 U	3.3 U	2 U	2.7 U	4.6 U
2-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
2-Nitroaniline	µg/L		1 U	0.94 U		
3,3'-Dichlorobenzidine	µg/L		1 U	0.94 U		
3-Nitroaniline	µg/L		1 U	0.94 U		
4-Chloroaniline	µg/L		1 U	0.94 U		
4-Chlorophenyl phenyl ether	µg/L		1 U	0.94 U		
4-Chlorotoluene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
4-Nitroaniline	µg/L		1 U	0.94 U		
bis(2-chloroethyl)ether	µg/L		1 U	0.94 U		
bis(2-chloroisopropyl)ether	µg/L		1 U	0.94 U		
Bromobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Bromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Bromodichloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Bromoform	µg/L	2 U	1 U	1 U	1 U	2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8	UCCMW-8
	Sample ID	**UCCMW-8-122014**	**UCCMW-8-032015**	**UCCMW-8-072015**	**UCCMW-8-102015**	**UCCMW-8-022016**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	12/12/2014	3/23/2015	7/8/2015	10/21/2015	2/1/2016
VOCs						
Bromomethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	1.2 U
Carbon tetrachloride	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Chlorobenzene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Chloroethane	µg/L	2 U	1 U	1 U	1 U	2 U
Chloroform	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Chloromethane	µg/L	2 U	1 U	1 U	1 U	2 U
cis-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Dibromochloromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Dibromomethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Dichlorodifluoromethane	µg/L	0.68 U	0.2 U	0.2 U	0.2 U	0.4 U
Hexachlorobenzene	µg/L		1 U	0.94 U		
Hexachlorobutadiene	µg/L	0.5 U	0.2 U	0.2 U	0.2 U	0.4 U
Hexachloroethane	µg/L		1 U	0.94 U		
Iodomethane	µg/L	5.2 U	1 U	1.3 U	1 U	8.6 U
m-Dinitrobenzene	µg/L		1 U	0.94 U		
Methylene chloride	µg/L	2 U	1 U	1 U	1 U	2 U
Nitrobenzene	µg/L		1 U	0.94 U		
Pyridine	µg/L		1 U	0.94 U		
trans-1,3-Dichloropropene	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U
Trichlorofluoromethane	µg/L	0.4 U	0.2 U	0.2 U	0.2 U	0.4 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-10
	Sample ID	**UCCMW-9-012016**	**UCCMW-9-082016**	**UCCMW-9-032017**	**UCCMW-9-030920**	**UCCMW-10-06201(**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	1/27/2016	8/12/2016	3/8/2017	3/9/2020	6/13/2014
BTEX						
Benzene	µg/L				0.2 U	1 U
Ethylbenzene	µg/L				0.2 U	1 U
Toluene	µg/L				1 U	1 U
Xylene (meta & para)	µg/L				0.4 U	1 U
Xylene (ortho)	µg/L				0.2 U	1 U
Xylene (total)	µg/L				0.4 U	2
Conventionals						
Dissolved Oxygen	mg/L				0.48	
Nitrate	µg/L					2000
ORP	mV				25.7	
pH	pH				6.66	
Sulfate	µg/L					24000
Total Organic Carbon	µg/L					9200
Turbidity	ntu				9.84	
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.86	0.66	0.99	0.2 U
Tetrachloroethene	µg/L	1.4	6.3	0.38	0.2 U	0.9
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.52	0.27	0.2 U	0.2 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.15	0.2 U
SVOCs						
Naphthalene	µg/L				1 U	
Total Metals						
Arsenic	µg/L				6.3	
TPHs						
Diesel Range Organics	µg/L				210 U	300
Gasoline Range Organics	µg/L				100 U	100
Oil Range Organics	µg/L				210 U	480
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L				0.2 U	
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.02 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-10
	Sample ID	**UCCMW-9-012016**	**UCCMW-9-082016**	**UCCMW-9-032017**	**UCCMW-9-030920**	**UCCMW-10-06201**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	1/27/2016	8/12/2016	3/8/2017	3/9/2020	6/13/2014
VOCs						
1,3,5-Trimethylbenzene	µg/L				0.2 U	
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1.6 U	1 U	1 U
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	µg/L				2 U	
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	µg/L				5 U	
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.27 U	0.34 U	0.2 U	0.2 U	0.35 U
Carbon disulfide	µg/L				0.2 U	
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1.3 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cymene	µg/L				0.2 U	
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.27 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2 U	0.2 U	1 U	0.2 U
Iodomethane	µg/L	1.4 U	1.8 U	1 U	1.5 U	2.1 U
iso-Propylbenzene	µg/L				0.2 U	
Methyl ethyl ketone	µg/L				5 U	
Methyl iso butyl ketone	µg/L				2 U	
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
Methyl-Tert-Butyl Ether	µg/L				0.2 U	
n-Butylbenzene	µg/L				0.2 U	
n-Propylbenzene	µg/L				0.2 U	
sec-Butylbenzene	µg/L				0.2 U	
Styrene	µg/L				0.2 U	
tert-Butylbenzene	µg/L				0.2 U	
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl acetate	µg/L				1 U	

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9
	Sample ID	**UCCMW-9-052014**	**UCCMW-9-092014**	**UCCMW-9-122014**	**UCCMW-9-032015**	**UCCMW-9-072015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/28/2014	9/13/2014	12/17/2014	3/30/2015	7/9/2015
BTEX						
Benzene	µg/L	1 U	1	1 U	1 U	1 U
Ethylbenzene	µg/L	1 U	1	1 U	1 U	1 U
Toluene	µg/L	1 U	1	1 U	1 U	1 U
Xylene (meta & para)	µg/L	1 U	1	1 U	1 U	1 U
Xylene (ortho)	µg/L	1 U	1	1 U	1 U	1 U
Xylene (total)	µg/L	2	2	2	1 U	1 U
Conventionals						
Nitrate	µg/L	1000				
Sulfate	µg/L	19000				
Total Organic Carbon	µg/L	2000				
cVOCs						
cis-1,2-Dichloroethene	µg/L	0.2 U	0.21	0.2 U	0.2 U	0.49
Tetrachloroethene	µg/L	1	2.5	5.7	0.86	0.37
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.23	0.22	0.2 U	0.26
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Gases						
Ethane	µg/L	1 U				
Ethene	µg/L	1 U				
Methane	µg/L	16				
TPHs						
Diesel Range Organics	µg/L	250 U	260	260	260 U	270 U
Gasoline Range Organics	µg/L	100	100	100	100 U	100 U
Oil Range Organics	µg/L	410 U	410	410	410 U	440 U
VOCs						
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2	0.2 U	0.2 U	0.26 U
1,2,3-Trichloropropane	µg/L	0.25 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloroethyl vinyl ether	µg/L	1 U	1 U	1.3 U	1 U	1 U

Table B.1
Historical Groundwater Data within Study Area

	Location	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9	UCCMW-9
	Sample ID	**UCCMW-9-052014**	**UCCMW-9-092014**	**UCCMW-9-122014**	**UCCMW-9-032015**	**UCCMW-9-072015**
	Depth	5-15 ft	5-15 ft	5-15 ft	5-15 ft	5-15 ft
	Date	5/28/2014	9/13/2014	12/17/2014	3/30/2015	7/9/2015
VOCs						
2-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Chlorotoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	1 U	1 U	1 U	1 U	1 U
Bromomethane	µg/L	0.2 U	0.31 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.2 U	0.2	0.2 U	0.2 U	0.2 U
Iodomethane	µg/L	1 U	1.8 U	1.5 U	1 U	1 U
Methylene chloride	µg/L	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table B.2
Historical Soil Data within Study Area

	Location	BB-1	BC-6	BLBH-23	BLBH-23	BLSS-1
	Sample ID	**BB-1-10**	**BC-6-2.5**	**BLBH-23-3**	**BLBH-23-15**	**BLSS-1 0-0.5**
	Depth	10-11 ft	2.5-2.5 ft	3-3 ft	15-15 ft	0-0.5 ft
	Date	05/19/2009	06/23/2008	09/04/2009	09/04/2009	09/09/2009
BTEX						
Benzene	mg/kg	0.0011 U	0.02 U	0.02 U	0.02 U	0.02 U
Ethylbenzene	mg/kg	0.0011 U	0.067 U	0.029 U	0.032 U	0.055 U
Toluene	mg/kg	0.0056 U	0.067 U	0.029 U	0.032 U	0.055 U
Xylene (meta & para)	mg/kg	0.0023 U	0.067 U	0.029 U	0.032 U	0.055 U
Xylene (ortho)	mg/kg	0.0011 U	0.067 U	0.029 U	0.032 U	0.055 U
Xylene (total)	mg/kg	0.057 U	0.067 U	0.029 U	0.032 U	0.055 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U				0.0013 U
Tetrachloroethene	mg/kg	0.0011 U				0.0013 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U				0.0013 U
Trichloroethene	mg/kg	0.0011 U				0.0013 U
Vinyl chloride	mg/kg	0.0011 U				0.0013 U
Metals						
Arsenic	mg/kg	12 U				
Barium	mg/kg					
Cadmium	mg/kg	0.59 U				
Chromium	mg/kg					
Lead	mg/kg	5.9 U				
Mercury	mg/kg	0.29 U				
Selenium	mg/kg	12 U				
Silver	mg/kg	0.59 U				
SVOCs						
1-Methylnaphthalene	mg/kg			0.0069 U	0.0077 U	
2-Methylnaphthalene	mg/kg			0.0069 U	0.0077 U	
Naphthalene	mg/kg	0.0011 U		0.0069 U	0.0077 U	
TPHs						
Diesel-range organics	mg/kg	29 U	31 U	130 U	29 U	170 U
Gasoline-range organics	mg/kg	5.7 U	6.7 U	1.5 U	1.6 U	2.8 U
Oil-range organics	mg/kg		63 U			
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U				0.0013 U
1,1,1-Trichloroethane	mg/kg	0.0011 U				0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U				0.0013 U
1,1,2-Trichloroethane	mg/kg	0.0011 U				0.0013 U
1,1-Dichloroethane	mg/kg	0.0011 U				0.0013 U
1,1-Dichloroethene	mg/kg	0.0011 U				0.0013 U
1,1-Dichloropropene	mg/kg	0.0011 U				0.0013 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U				0.0013 U
1,2,3-Trichloropropane	mg/kg	0.0011 U				0.0013 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U				0.0013 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U				
1,2-Dibromo-3-chloropropane	mg/kg	0.0056 U				0.0067 U
1,2-Dibromoethane	mg/kg	0.0011 U				0.0013 U
1,2-Dichlorobenzene	mg/kg	0.0011 U				0.0013 U
1,2-Dichloroethane	mg/kg	0.0011 U				0.0013 U

Table B.2
Historical Soil Data within Study Area

	Location	BB-1	BC-6	BLBH-23	BLBH-23	BLSS-1
	Sample ID	**BB-1-10**	**BC-6-2.5**	**BLBH-23-3**	**BLBH-23-15**	**BLSS-1 0-0.5**
	Depth	10-11 ft	2.5-2.5 ft	3-3 ft	15-15 ft	0-0.5 ft
	Date	05/19/2009	06/23/2008	09/04/2009	09/04/2009	09/09/2009
VOCs						
1,2-Dichloropropane	mg/kg	0.0011 U				0.0013 U
1,3,5-Trimethylbenzene	mg/kg	0.0011 U				
1,3-Dichlorobenzene	mg/kg	0.0011 U				0.0013 U
1,3-Dichloropropane	mg/kg	0.0011 U				0.0013 U
1,4-Dichlorobenzene	mg/kg	0.0011 U				0.0013 U
2,2-Dichloropropane	mg/kg	0.0011 U				0.0013 U
2-Chloroethyl vinyl ether	mg/kg	0.011 U				0.0067 U
2-Chlorotoluene	mg/kg	0.0011 U				0.0013 U
2-Hexanone	mg/kg	0.0056 U				
4-Chlorotoluene	mg/kg	0.0011 U				0.0013 U
Acetone	mg/kg					
Bromobenzene	mg/kg	0.0011 U				0.0013 U
Bromochloromethane	mg/kg	0.0011 U				0.0013 U
Bromodichloromethane	mg/kg	0.0011 U				0.0013 U
Bromoform	mg/kg	0.0011 U				0.0013 U
Bromomethane	mg/kg	0.0011 U				0.0013 U
Carbon disulfide	mg/kg	0.0011 U				
Carbon tetrachloride	mg/kg	0.0011 U				0.0013 U
Chlorobenzene	mg/kg	0.0011 U				0.0013 U
Chloroethane	mg/kg	0.0056 U				0.0067 U
Chloroform	mg/kg	0.0011 U				0.0013 U
Chloromethane	mg/kg	0.0056 U				0.0067 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U				0.0013 U
Cymene	mg/kg	0.0011 U				
Dibromochloromethane	mg/kg	0.0011 U				0.0013 U
Dibromomethane	mg/kg	0.0011 U				0.0013 U
Dichlorodifluoromethane	mg/kg	0.0011 U				0.0013 U
Hexachlorobutadiene	mg/kg	0.0056 U				0.0067 U
Iodomethane	mg/kg	0.0056 U				0.0067 U
Isopropylbenzene	mg/kg	0.0011 U				
Methyl ethyl ketone	mg/kg					
Methyl isobutyl ketone	mg/kg	0.0056 U				
Methylene chloride	mg/kg	0.0056 U				0.0067 U
Methyl-tert-butyl ether	mg/kg	0.0011 U				
n-Butylbenzene	mg/kg	0.0011 U				
n-Propylbenzene	mg/kg	0.0011 U				
sec-Butylbenzene	mg/kg	0.0011 U				
Styrene	mg/kg	0.0011 U				
tert-Butylbenzene	mg/kg	0.0011 U				
trans-1,3-Dichloropropene	mg/kg	0.0011 U				0.0013 U
Trichlorofluoromethane	mg/kg	0.0011 U				0.0013 U
Vinyl acetate	mg/kg	0.0056 U				

Table B.2
Historical Soil Data within Study Area

	Location	BLSS-2	CDM-B1	CDM-B2	CDM-B2	CDM-B3
	Sample ID	**BLSS-2 0-0.5**	**CDM-B1-6**	**CDM-B2-7**	**CDM-B2Dup-7**	**CDM-B3-9**
	Depth	0-0.5 ft	6-6 ft	7-7 ft	7-7 ft	9-9 ft
	Date	09/09/2009	04/06/2009	04/02/2009	04/02/2009	04/02/2009
BTEX						
Benzene	mg/kg	0.02 U				
Ethylbenzene	mg/kg	0.057 U				
Toluene	mg/kg	0.057 U				
Xylene (meta & para)	mg/kg	0.057 U				
Xylene (ortho)	mg/kg	0.057 U				
Xylene (total)	mg/kg	0.057 U				
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Tetrachloroethene	mg/kg	0.001 U		0.0016 U	0.11 U	0.19 U
trans-1,2-Dichloroethene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Trichloroethene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Vinyl chloride	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
TPHs						
Diesel-range organics	mg/kg	170 U		75 U	76 U	46 U
Gasoline-range organics	mg/kg	2.8 U		30 U	30 U	
Oil-range organics	mg/kg			150 U	150 U	
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1,1-Trichloroethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1,2,2-Tetrachloroethane	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1,2-Trichloroethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1-Dichloroethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1-Dichloroethene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,1-Dichloropropene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2,3-Trichlorobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2,3-Trichloropropane	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2,4-Trichlorobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0052 UJ	0.0049 U	0.0079 U	0.56 U	0.94 U
1,2-Dibromoethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2-Dichlorobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2-Dichloroethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,2-Dichloropropane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,3-Dichlorobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
1,3-Dichloropropane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
1,4-Dichlorobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
2,2-Dichloropropane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
2-Chloroethyl vinyl ether	mg/kg	0.0052 U	0.0049 U	0.0079 U	0.56 U	0.94 U
2-Chlorotoluene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
4-Chlorotoluene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
Bromobenzene	mg/kg	0.001 UJ	0.00099 U	0.0016 U	0.11 U	0.19 U
Bromochloromethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Bromodichloromethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Bromoform	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Bromomethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Carbon tetrachloride	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U

Table B.2
Historical Soil Data within Study Area

	Location	BLSS-2	CDM-B1	CDM-B2	CDM-B2	CDM-B3
	Sample ID	**BLSS-2 0-0.5**	**CDM-B1-6**	**CDM-B2-7**	**CDM-B2Dup-7**	**CDM-B3-9**
	Depth	0-0.5 ft	6-6 ft	7-7 ft	7-7 ft	9-9 ft
	Date	09/09/2009	04/06/2009	04/02/2009	04/02/2009	04/02/2009
VOCs						
Chlorobenzene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Chloroethane	mg/kg	0.0052 U	0.0049 U	0.0079 U	0.56 U	0.94 U
Chloroform	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Chloromethane	mg/kg	0.0052 U	0.0049 U	0.0079 U	0.56 U	0.94 U
cis-1,3-Dichloropropene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Dibromochloromethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Dibromomethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Dichlorodifluoromethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Hexachlorobutadiene	mg/kg	0.0052 UJ	0.0049 U	0.0079 U	0.56 U	0.94 U
Iodomethane	mg/kg	0.0052 U	0.0049 U	0.0079 U	0.56 U	0.94 U
Methylene chloride	mg/kg	0.0052 U	0.0049 U	0.0079 U	0.84 J	0.94 U
trans-1,3-Dichloropropene	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U
Trichlorofluoromethane	mg/kg	0.001 U	0.00099 U	0.0016 U	0.11 U	0.19 U

Table B.2
Historical Soil Data within Study Area

	Location	CDM-B13	CDM-B18	CDM-B20	CDM-B29	CDM-B30
	Sample ID	**CDM-B13-6**	**CDM-B18-7**	**CDM-RC-B20-6**	**CDM-RC-B29-6**	**CDM-B30-8-05/13**
	Depth	6-6 ft	7-7 ft	6-6 ft	6-6 ft	8-8 ft
	Date	04/02/2009	04/06/2009	06/27/2011	06/28/2011	05/10/2013
BTEX						
Benzene	mg/kg					0.0013 U
Ethylbenzene	mg/kg				0.0011 U	0.071 U
Toluene	mg/kg				0.0056 U	0.0064 U
Xylene (meta & para)	mg/kg					0.14 U
Xylene (ortho)	mg/kg					0.071 U
Xylene (total)	mg/kg					0.14 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Tetrachloroethene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Trichloroethene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Vinyl chloride	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Metals						
Lead	mg/kg					
SVOCs						
Naphthalene	mg/kg					
TPHs						
Diesel-range organics	mg/kg	61 U				
Gasoline-range organics	mg/kg	24 U		71 U	42 U	
Oil-range organics	mg/kg	120 U				
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2,4-Trimethylbenzene	mg/kg					
1,2-Dibromo-3-chloropropane	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0017 U
1,3,5-Trimethylbenzene	mg/kg				0.0011 U	
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
2-Chloroethyl vinyl ether	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
2-Hexanone	mg/kg				0.0056 U	

Table B.2
Historical Soil Data within Study Area

	Location	CDM-B13	CDM-B18	CDM-B20	CDM-B29	CDM-B30
	Sample ID	**CDM-B13-6**	**CDM-B18-7**	**CDM-RC-B20-6**	**CDM-RC-B29-6**	**CDM-B30-8-05/13**
	Depth	6-6 ft	7-7 ft	6-6 ft	6-6 ft	8-8 ft
	Date	04/02/2009	04/06/2009	06/27/2011	06/28/2011	05/10/2013
VOCs						
4-Chlorotoluene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Acetone	mg/kg					
Bromobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Bromochloromethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Bromodichloromethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Bromoform	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Bromomethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Carbon disulfide	mg/kg				0.0011 U	
Carbon tetrachloride	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Chlorobenzene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Chloroethane	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
Chloroform	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Chloromethane	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Cymene	mg/kg					
Dibromochloromethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Dibromomethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Hexachlorobutadiene	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
Iodomethane	mg/kg	0.0055 U	0.0065 U		0.0056 U	0.0064 U
Isopropylbenzene	mg/kg					
Methyl ethyl ketone	mg/kg				0.0056 U	
Methyl isobutyl ketone	mg/kg				0.0056 U	
Methylene chloride	mg/kg	0.0055 U	0.0065 U			0.0084 U
Methyl-tert-butyl ether	mg/kg				0.0011 U	
n-Butylbenzene	mg/kg					
n-Propylbenzene	mg/kg					
sec-Butylbenzene	mg/kg					
Styrene	mg/kg				0.0011 U	
tert-Butylbenzene	mg/kg				0.0011 U	
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0013 U		0.0011 U	0.0013 U
Vinyl acetate	mg/kg				0.0056 U	

Table B.2
Historical Soil Data within Study Area

	Location	CDM-B31	CDM-B32	CDM-B32	CDM-B33	CDM-B34
	Sample ID	**CDM-B31-9-05/13**	**DM-B32Dup-7-05/1**	**CDM-B32-2.5-05/1**	**CDM-B33-7-05/13**	**CDM-B34-7-05/13**
	Depth	9-9 ft	2.5-2.5 ft	2.5-2.5 ft	7-7 ft	7-7 ft
	Date	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Tetrachloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Trichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Vinyl chloride	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,2-Dichloropropane	mg/kg	0.0015 U	0.0014 U	0.0014 U	0.0019 U	0.0015 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
2-Chloroethyl vinyl ether	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Bromoform	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Chloroethane	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Chloromethane	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Hexachlorobutadiene	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
Iodomethane	mg/kg	0.0057 U	0.0054 U	0.0054 U	0.0074 U	0.0059 U
Methylene chloride	mg/kg	0.0074 U	0.0071 U	0.007 U	0.0096 U	0.0077 U

Table B.2
Historical Soil Data within Study Area

	Location	CDM-B31	CDM-B32	CDM-B32	CDM-B33	CDM-B34
	Sample ID	**CDM-B31-9-05/13**	**DM-B32Dup-7-05/1**	**CDM-B32-2.5-05/1**	**CDM-B33-7-05/13**	**CDM-B34-7-05/13**
	Depth	9-9 ft	2.5-2.5 ft	2.5-2.5 ft	7-7 ft	7-7 ft
	Date	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0015 U	0.0012 U

Table B.2
Historical Soil Data within Study Area

		CDM-B7	CDM-B8	CDM-B10	CDM-B11	CDM-B12
	Location	CDM-B7	CDM-B8	CDM-B10	CDM-B11	CDM-B12
	Sample ID	**CDM-B7-9**	**CDM-B8-7**	**CDM-B10-6**	**CDM-B11-6**	**CDM-B12-5**
	Depth	9-9 ft	7-7 ft	6-6 ft	6-6 ft	5-5 ft
	Date	04/01/2009	04/07/2009	04/07/2009	04/07/2009	04/07/2009
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Trichloroethene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Vinyl chloride	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
TPHs						
Diesel-range organics	mg/kg	61 U				
Gasoline-range organics	mg/kg	24 U				
Oil-range organics	mg/kg	120 U				
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1,1-Trichloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1,2,2-Tetrachloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1,2-Trichloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1-Dichloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1-Dichloroethene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,1-Dichloropropene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2,3-Trichlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2,3-Trichloropropane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2,4-Trichlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
1,2-Dibromoethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2-Dichlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2-Dichloroethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,2-Dichloropropane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,3-Dichlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,3-Dichloropropane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
1,4-Dichlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
2,2-Dichloropropane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
2-Chloroethyl vinyl ether	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
2-Chlorotoluene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
4-Chlorotoluene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Bromobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Bromochloromethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Bromodichloromethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Bromoform	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Bromomethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Carbon tetrachloride	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Chlorobenzene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Chloroethane	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
Chloroform	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Chloromethane	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
cis-1,3-Dichloropropene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Dibromochloromethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Dibromomethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U

Table B.2
Historical Soil Data within Study Area

	Location	CDM-B7	CDM-B8	CDM-B10	CDM-B11	CDM-B12
	Sample ID	**CDM-B7-9**	**CDM-B8-7**	**CDM-B10-6**	**CDM-B11-6**	**CDM-B12-5**
	Depth	9-9 ft	7-7 ft	6-6 ft	6-6 ft	5-5 ft
	Date	04/01/2009	04/07/2009	04/07/2009	04/07/2009	04/07/2009
VOCs						
Dichlorodifluoromethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Hexachlorobutadiene	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
Iodomethane	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
Methylene chloride	mg/kg	0.0052 U	0.005 U	0.0048 U	0.0054 U	0.0045 U
trans-1,3-Dichloropropene	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U
Trichlorofluoromethane	mg/kg	0.001 U	0.001 U	0.00097 U	0.0011 U	0.0009 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B1	EAIa-B1	EAIa-B1	EAIa-B1	EAIa-B2
	Sample ID	**EAIa-B1-5**	**EAIa-B1-10**	**EAIa-B1-20**	**EAIa-B1-23**	**EAIa-B2-5**
	Depth	5-5 ft	10-10 ft	20-20 ft	23-23 ft	5-5 ft
	Date	05/03/2016	05/03/2016	05/03/2016	05/03/2016	05/03/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B10	EAIa-B10	EAIa-B11	EAIb-B1	EAIb-B1
	Sample ID	**EAIa-B10-10**	**EAIa-B10-20**	**EAIa-B11-10**	**EAIb-B1-5**	**EAIb-B1-10**
	Depth	10-10 ft	20-20 ft	10-10 ft	5-5 ft	10-10 ft
	Date	05/04/2016	05/04/2016	05/04/2016	05/10/2016	05/10/2016
BTEX						
Benzene	mg/kg			0.02 U		
Ethylbenzene	mg/kg			0.02 U		
Toluene	mg/kg			0.02 U		
Xylene (total)	mg/kg			0.06 U		
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U		0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U		0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
TPHs						
Diesel-range organics	mg/kg			50 U		
Gasoline-range organics	mg/kg			2 U		
Oil-range organics	mg/kg			250 U		
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U		0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U		0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U		0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B2	EAIa-B2	EAIa-B2	EAIa-B3	EAIa-B3
	Sample ID	**EAIa-B2-10**	**EAIa-B2-20**	**EAIa-B2-23**	**EAIa-B3-5**	**EAIa-B3-10**
	Depth	10-10 ft	20-20 ft	23-23 ft	5-5 ft	10-10 ft
	Date	05/03/2016	05/03/2016	05/03/2016	05/03/2016	05/03/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.52 J	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B3	EAIa-B3	EAIa-B4	EAIa-B4	EAIa-B4
	Sample ID	**EAIa-B3-20**	**EAIa-B3-23**	**EAIa-B4-5**	**EAIa-B4-10**	**EAIa-B4-15**
	Depth	20-20 ft	23-23 ft	5-5 ft	10-10 ft	15-15 ft
	Date	05/03/2016	05/03/2016	05/03/2016	05/03/2016	05/03/2016
BTEX						
Benzene	mg/kg					0.02 U
Ethylbenzene	mg/kg					0.02 U
Toluene	mg/kg					0.02 U
Xylene (total)	mg/kg					0.06 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
TPHs						
Diesel-range organics	mg/kg					50 U
Gasoline-range organics	mg/kg					2 U
Oil-range organics	mg/kg					250 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B4	EAIa-B4	EAIa-B5	EAIa-B5	EAIa-B5
	Sample ID	**EAIa-B4-20**	**EAIa-B4-23**	**EAIa-B5-15**	**EAIa-B5-20**	**EAIa-B5-25**
	Depth	20-20 ft	23-23 ft	15-15 ft	20-20 ft	25-25 ft
	Date	05/03/2016	05/03/2016	05/03/2016	05/03/2016	05/03/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B6	EAIa-B6	EAIa-B6	EAIa-B7	EAIa-B8
	Sample ID	**EAIa-B6-15**	**EAIa-B6-20**	**EAIa-B6-25**	**EAIa-B7-10**	**EAIa-B8-5**
	Depth	15-15 ft	20-20 ft	25-25 ft	10-10 ft	5-5 ft
	Date	05/04/2016	05/04/2016	05/04/2016	05/04/2016	05/04/2016
BTEX						
Benzene	mg/kg				0.02 U	0.02 U
Ethylbenzene	mg/kg				0.02 U	0.02 U
Toluene	mg/kg				0.02 U	0.02 U
Xylene (total)	mg/kg				0.06 U	0.06 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Metals						
Arsenic	mg/kg					
Cadmium	mg/kg					1 U
Chromium	mg/kg					9.95 J
Lead	mg/kg					
Mercury	mg/kg					1 U
TPHs						
Diesel-range organics	mg/kg				50 U	50 U
Gasoline-range organics	mg/kg				2 U	2 U
Oil-range organics	mg/kg				250 U	250 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIa-B8	EAIa-B8	EAIa-B9	EAIa-B10	EAIa-B10
	Sample ID	**EAIa-B8Dup-5**	**EAIa-B8-15**	**EAIa-B9-5**	**EAIa-B10-5**	**EAIa-B10Dup-5**
	Depth	5-5 ft	15-15 ft	5-5 ft	5-5 ft	10-10 ft
	Date	05/04/2016	05/04/2016	05/04/2016	05/04/2016	05/04/2016
BTEX						
Benzene	mg/kg			0.02 U	0.02 U	
Ethylbenzene	mg/kg			0.02 U	0.02 U	
Toluene	mg/kg			0.02 U	0.02 U	
Xylene (total)	mg/kg			0.06 U	0.06 U	
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.05 U		0.05 U	
Tetrachloroethene	mg/kg		0.025 U		0.025 U	
trans-1,2-Dichloroethene	mg/kg		0.05 U		0.05 U	
Trichloroethene	mg/kg		0.02 U		0.02 U	
Vinyl chloride	mg/kg		0.05 U		0.05 U	
Metals						
Arsenic	mg/kg	10 U				
Cadmium	mg/kg	10 U			1 U	2 U
Chromium	mg/kg	50 U			9.49 J	10 U
Lead	mg/kg	10 U				2 U
Mercury	mg/kg	10 U			1 U	2 U
TPHs						
Diesel-range organics	mg/kg			50 U	50 U	
Gasoline-range organics	mg/kg			2 U	2 U	
Oil-range organics	mg/kg			250 U	250 U	
VOCs						
1,1,1-Trichloroethane	mg/kg		0.05 U		0.05 U	
1,1-Dichloroethane	mg/kg		0.05 U		0.05 U	
1,1-Dichloroethene	mg/kg		0.05 U		0.05 U	
1,2-Dichloroethane	mg/kg		0.05 U		0.05 U	
Chloroethane	mg/kg		0.5 U		0.5 U	
Methylene chloride	mg/kg		0.5 U		0.5 U	

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B1	EAIb-B2	EAIb-B2	EAIb-B2	EAIb-B3
	Sample ID	**EAIb-B1-15**	**EAIb-B2-5**	**EAIb-B2-10**	**EAIb-B2-15**	**EAIb-B3-3**
	Depth	15-15 ft	5-5 ft	10-10 ft	15-15 ft	3-3 ft
	Date	05/10/2016	05/10/2016	05/10/2016	05/10/2016	05/10/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B10	EAIb-B10	EAIb-B10	EAIb-B11	EAIb-B11
	Sample ID	**EAIb-B10-3**	**EAIb-B10-8**	**EAIb-B10-14**	**EAIb-B11-3**	**EAIb-B11-8**
	Depth	3-3 ft	8-8 ft	14-14 ft	3-3 ft	8-8 ft
	Date	05/11/2016	05/11/2016	05/11/2016	05/11/2016	05/11/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B11	EAIb-B12	EAIb-B12	EAIb-B12	EAIb-B13
	Sample ID	**EAIb-B11-14**	**EAIb-B12-3**	**EAIb-B12-8**	**EAIb-B12-14**	**EAIb-B13-3**
	Depth	14-14 ft	3-3 ft	8-8 ft	14-14 ft	3-3 ft
	Date	05/11/2016	05/11/2016	05/11/2016	05/11/2016	05/11/2016
BTEX						
Benzene	mg/kg				0.02 U	
Ethylbenzene	mg/kg				0.02 U	
Toluene	mg/kg				0.02 U	
Xylene (total)	mg/kg				0.06 U	
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TPHs						
Diesel-range organics	mg/kg				50 U	
Gasoline-range organics	mg/kg				2 U	
Oil-range organics	mg/kg				250 U	
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B13	EAIb-B13	EAIb-B14	EAIb-B14	EAIb-B14
	Sample ID	**EAIb-B13-8**	**EAIb-B13-14**	**EAIb-B14-3**	**EAIb-B14-8**	**EAIb-B14-14**
	Depth	8-8 ft	14-14 ft	3-3 ft	8-8 ft	14-14 ft
	Date	05/11/2016	05/11/2016	05/11/2016	05/11/2016	05/11/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B15	EAIb-B15	EAIb-B15	EAIb-B16	EAIb-B16
	Sample ID	**EAIb-B15-3**	**EAIb-B15-8**	**EAIb-B15-14**	**EAIb-B16-5**	**EAIb-B16-10**
	Depth	3-3 ft	8-8 ft	14-14 ft	5-5 ft	10-10 ft
	Date	05/11/2016	05/11/2016	05/11/2016	05/12/2016	05/12/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg		0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B16	EAIb-B17	EAIb-B17	EAIb-B17	EAIb-B18
	Sample ID	**EAIb-B16-15**	**EAIb-B17-3**	**EAIb-B17-8**	**EAIb-B17-14**	**EAIb-B18-3**
	Depth	15-15 ft	3-3 ft	8-8 ft	14-14 ft	3-3 ft
	Date	05/12/2016	05/12/2016	05/12/2016	05/12/2016	05/12/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B18	EAIb-B18	EAIb-B19	EAIb-B19	EAIb-B19
	Sample ID	**EAIb-B18-8**	**EAIb-B18-14**	**EAIb-B19-4**	**EAIb-B19-9**	**EAIb-B19-14**
	Depth	8-8 ft	14-14 ft	4-4 ft	9-9 ft	14-14 ft
	Date	05/12/2016	05/12/2016	05/12/2016	05/12/2016	05/12/2016
BTEX						
Benzene	mg/kg			0.02 U		
Ethylbenzene	mg/kg			0.02 U		
Toluene	mg/kg			0.02 U		
Xylene (total)	mg/kg			0.06 U		
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TPHs						
Diesel-range organics	mg/kg			74 CN		
Gasoline-range organics	mg/kg			2 U		
Oil-range organics	mg/kg					
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B20	EAIb-B20	EAIb-B20	EAIb-B21	EAIb-B21
	Sample ID	**EAIb-B20-5**	**EAIb-B20-10**	**EAIb-B20-15**	**EAIb-B21-10**	**EAIb-B21-15**
	Depth	5-5 ft	10-10 ft	15-15 ft	10-10 ft	15-15 ft
	Date	05/12/2016	05/12/2016	05/12/2016	05/12/2016	05/12/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B21	EAIb-B22	EAIb-B22	EAIb-B22	EPI-B-1
	Sample ID	**EAIb-B21-5**	**EAIb-B22-5**	**EAIb-B22-10**	**EAIb-B22-15**	**EPI-B-1:8**
	Depth	5-5 ft	5-5 ft	10-10 ft	15-15 ft	8-8 ft
	Date	05/12/2016	05/12/2016	05/12/2016	05/12/2016	07/22/2004
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	10 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
1,1,2,2-Tetrachloroethane	mg/kg					10 U
1,1,2-Trichloroethane	mg/kg					10 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
1,1-Dichloropropene	mg/kg					10 U
1,2,3-Trichlorobenzene	mg/kg					10 U
1,2,3-Trichloropropane	mg/kg					10 U
1,2,4-Trichlorobenzene	mg/kg					10 U
1,2-Dibromo-3-chloropropane	mg/kg					10 U
1,2-Dibromoethane	mg/kg					5 U
1,2-Dichlorobenzene	mg/kg					10 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	10 U
1,2-Dichloropropane	mg/kg					10 U
1,3-Dichlorobenzene	mg/kg					10 U
1,3-Dichloropropane	mg/kg					10 U
1,4-Dichlorobenzene	mg/kg					10 U
2,2-Dichloropropane	mg/kg					10 U
2-Chlorotoluene	mg/kg					10 U
4-Chlorotoluene	mg/kg					10 U
Bromobenzene	mg/kg					10 U
Bromochloromethane	mg/kg					10 U
Bromodichloromethane	mg/kg					10 U
Bromoform	mg/kg					10 U
Bromomethane	mg/kg					10 U
Carbon tetrachloride	mg/kg					10 U
Chlorobenzene	mg/kg					10 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	10 U
Chloroform	mg/kg					10 U
Chloromethane	mg/kg					10 U
cis-1,3-Dichloropropene	mg/kg					10 U
Dibromochloromethane	mg/kg					10 U
Dibromomethane	mg/kg					10 U
Dichlorodifluoromethane	mg/kg					10 U
Hexachlorobutadiene	mg/kg					10 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	10 U
trans-1,3-Dichloropropene	mg/kg					10 U
Trichlorofluoromethane	mg/kg					10 U

Table B.2
Historical Soil Data within Study Area

Location	EAIb-B21	EAIb-B22	EAIb-B22	EAIb-B22	EPI-B-1
Sample ID	**EAIb-B21-5**	**EAIb-B22-5**	**EAIb-B22-10**	**EAIb-B22-15**	**EPI-B-1:8**
Depth	5-5 ft	5-5 ft	10-10 ft	15-15 ft	8-8 ft
Date	05/12/2016	05/12/2016	05/12/2016	05/12/2016	07/22/2004

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B3	EAIb-B3	EAIb-B4	EAIb-B4	EAIb-B4
	Sample ID	**EAIb-B3-7.5**	**EAIb-B3-13**	**EAIb-B4-5**	**EAIb-B4-10**	**EAIb-B4-15**
	Depth	7.5-7.5 ft	13-13 ft	5-5 ft	10-10 ft	15-15 ft
	Date	05/10/2016	05/10/2016	05/10/2016	05/10/2016	05/10/2016
BTEX						
Benzene	mg/kg				0.02 U	
Ethylbenzene	mg/kg				0.02 U	
Toluene	mg/kg				0.02 U	
Xylene (total)	mg/kg				0.06 U	
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TPHs						
Diesel-range organics	mg/kg				50 U	
Gasoline-range organics	mg/kg				2 U	
Oil-range organics	mg/kg				250 U	
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B5	EAIb-B5	EAIb-B5	EAIb-B6	EAIb-B6
	Sample ID	**EAIb-B5-4**	**EAIb-B5-9**	**EAIb-B5-14**	**EAIb-B6-5**	**EAIb-B6-8**
	Depth	4-4 ft	9-9 ft	14-14 ft	5-5 ft	8-8 ft
	Date	05/10/2016	05/10/2016	05/10/2016	05/10/2016	05/10/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U		0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B6	EAIb-B7	EAIb-B7	EAIb-B7	EAIb-B8
	Sample ID	**EAIb-B6-13**	**EAIb-B7-3**	**EAIb-B7-8**	**EAIb-B7-14**	**EAIb-B8-14**
	Depth	13-13 ft	3-3 ft	8-8 ft	14-14 ft	14-14 ft
	Date	05/10/2016	05/10/2016	05/10/2016	05/10/2016	05/10/2016
BTEX						
Benzene	mg/kg					0.02 U
Ethylbenzene	mg/kg					0.02 U
Toluene	mg/kg					0.02 U
Xylene (total)	mg/kg					0.06 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TPHs						
Diesel-range organics	mg/kg					50 U
Gasoline-range organics	mg/kg					2 U
Oil-range organics	mg/kg					250 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EAIb-B8	EAIb-B8	EAIb-B9	EAIb-B9	EAIb-B9
	Sample ID	**EAIb-B8-3**	**EAIb-B8-8**	**EAIb-B9-3**	**EAIb-B9-8**	**EAIb-B9-14**
	Depth	3-3 ft	8-8 ft	3-3 ft	8-8 ft	14-14 ft
	Date	05/10/2016	05/10/2016	05/11/2016	05/11/2016	05/11/2016
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	mg/kg	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
trans-1,2-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Vinyl chloride	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
VOCs						
1,1,1-Trichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	mg/kg	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table B.2
Historical Soil Data within Study Area

	Location	EPI-B-15	EPI-B-16	ESD-B1	ESD-B2	ESS-B1
	Sample ID	**EPI-B-15:5**	**EPI-B-16:10**	**ESD-B1-7**	**ESD-B2-7**	**ESS-B1-5**
	Depth	9.5-9.5 ft	9.5-9.5 ft	7-8 ft	7-8 ft	5-6 ft
	Date	10/26/2004	10/26/2004	12/15/2011	12/15/2011	12/15/2011
BTEX						
Benzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
Ethylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
Toluene	mg/kg			0.0056 U	0.006 U	0.0061 U
Xylene (meta & para)	mg/kg			0.0023 U	0.0024 U	0.0024 U
Xylene (ortho)	mg/kg			0.0011 U	0.0012 U	0.0012 U
Xylene (total)	mg/kg			0.0023 U	0.0024 U	0.0024 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Tetrachloroethene	mg/kg	10 U	10 U	0.0011 U		
trans-1,2-Dichloroethene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Trichloroethene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Vinyl chloride	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
SVOCs						
Naphthalene	mg/kg			0.0011 U	0.0012 U	0.0012 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg			0.0011 U	0.0012 U	0.0012 U
1,1,1-Trichloroethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloroethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloroethene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloropropene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2,3-Trichloropropane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2,4-Trichlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2,4-Trimethylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
1,2-Dibromo-3-chloropropane	mg/kg	50 U	50 U	0.0056 U	0.006 U	0.0061 U
1,2-Dibromoethane	mg/kg	5 U	5 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichloroethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichloropropane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,3,5-Trimethylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
1,3-Dichlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,3-Dichloropropane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
1,4-Dichlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
2,2-Dichloropropane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
2-Chloroethyl vinyl ether	mg/kg			0.0056 U	0.006 U	0.0061 U
2-Chlorotoluene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
2-Hexanone	mg/kg			0.0056 U	0.006 U	0.0061 U
4-Chlorotoluene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Acetone	mg/kg			0.011 U	0.012 U	
Bromobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Bromochloromethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Bromodichloromethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Bromoform	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U

Table B.2
Historical Soil Data within Study Area

	Location	EPI-B-15	EPI-B-16	ESD-B1	ESD-B2	ESS-B1
	Sample ID	**EPI-B-15:5**	**EPI-B-16:10**	**ESD-B1-7**	**ESD-B2-7**	**ESS-B1-5**
	Depth	9.5-9.5 ft	9.5-9.5 ft	7-8 ft	7-8 ft	5-6 ft
	Date	10/26/2004	10/26/2004	12/15/2011	12/15/2011	12/15/2011
VOCs						
Bromomethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Carbon disulfide	mg/kg			0.0011 U	0.0012 U	0.0012 U
Carbon tetrachloride	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Chlorobenzene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Chloroethane	mg/kg	10 U	10 U	0.0056 U	0.006 U	0.0061 U
Chloroform	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Chloromethane	mg/kg	10 U	10 U	0.0056 U	0.006 U	0.0061 U
cis-1,3-Dichloropropene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Cymene	mg/kg			0.0011 U	0.0012 U	0.0012 U
Dibromochloromethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Dibromomethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Dichlorodifluoromethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Hexachlorobutadiene	mg/kg	10 U	10 U	0.0056 U	0.006 U	0.0061 U
Iodomethane	mg/kg			0.0056 U	0.006 U	0.0061 U
Isopropylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
Methyl ethyl ketone	mg/kg			0.0056 U	0.006 U	
Methyl isobutyl ketone	mg/kg			0.0056 U	0.006 U	0.0061 U
Methylene chloride	mg/kg	10 U	10 U	0.0056 U	0.006 U	0.0061 U
Methyl-tert-butyl ether	mg/kg			0.0011 U	0.0012 U	0.0012 U
n-Butylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
n-Propylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
sec-Butylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
Styrene	mg/kg			0.0011 U	0.0012 U	0.0012 U
tert-Butylbenzene	mg/kg			0.0011 U	0.0012 U	0.0012 U
trans-1,3-Dichloropropene	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Trichlorofluoromethane	mg/kg	10 U	10 U	0.0011 U	0.0012 U	0.0012 U
Vinyl acetate	mg/kg			0.0056 U	0.006 U	0.0061 U

Table B.2
Historical Soil Data within Study Area

	Location	EPI-B-2	EPI-B-3	EPI-B-4	EPI-B-5	EPI-B-6
	Sample ID	**EPI-B-2:8**	**EPI-B-3:8**	**EPI-B-4:8**	**EPI-B-5:8**	**EPI-B-6:8**
	Depth	8-8 ft	8-8 ft	8-8 ft	8-8 ft	8-8 ft
	Date	07/26/2004	07/26/2004	07/23/2004	07/26/2004	07/22/2004
cVOCs						
cis-1,2-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	mg/kg	10 U	10 U	10 U	10 U	
trans-1,2-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Trichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	mg/kg	10 U	10 U	10 U	10 U	10 U
VOCs						
1,1,1-Trichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,3-Trichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	mg/kg	50 U	50 U	50 U	50 U	50 U
1,2-Dibromoethane	mg/kg	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
2,2-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
2-Chlorotoluene	mg/kg	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromochloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromoform	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromomethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	mg/kg	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloroform	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Dibromomethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	mg/kg	10 U	10 U	10 U	10 U	10 U
Methylene chloride	mg/kg	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane	mg/kg	10 U	10 U	10 U	10 U	10 U

Table B.2
Historical Soil Data within Study Area

Location	EPI-B-2	EPI-B-3	EPI-B-4	EPI-B-5	EPI-B-6
Sample ID	**EPI-B-2:8**	**EPI-B-3:8**	**EPI-B-4:8**	**EPI-B-5:8**	**EPI-B-6:8**
Depth	8-8 ft	8-8 ft	8-8 ft	8-8 ft	8-8 ft
Date	07/26/2004	07/26/2004	07/23/2004	07/26/2004	07/22/2004

Table B.2
Historical Soil Data within Study Area

	Location	EPI-B-7	EPI-B-8	EPI-B-9	EPI-B-13	EPI-B-14
	Sample ID	**EPI-B-7:8**	**EPI-B-8:8**	**EPI-B-9:8**	**EPI-B-13:10**	**EPI-B-14:10**
	Depth	8-8 ft	8-8 ft	8-8 ft	9.5-9.5 ft	9.5-9.5 ft
	Date	07/23/2004	07/23/2004	07/23/2004	10/25/2004	10/25/2004
cVOCs						
cis-1,2-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Trichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	mg/kg	10 U	10 U	10 U	10 U	10 U
VOCs						
1,1,1-Trichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,1-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,3-Trichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	mg/kg	50 U	50 U	50 U	50 U	50 U
1,2-Dibromoethane	mg/kg	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
2,2-Dichloropropane	mg/kg	10 U	10 U	10 U	10 U	10 U
2-Chlorotoluene	mg/kg	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromochloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromoform	mg/kg	10 U	10 U	10 U	10 U	10 U
Bromomethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	mg/kg	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloroethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloroform	mg/kg	10 U	10 U	10 U	10 U	10 U
Chloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Dibromomethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	mg/kg	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	mg/kg	10 U	10 U	10 U	10 U	10 U
Methylene chloride	mg/kg	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	mg/kg	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane	mg/kg	10 U	10 U	10 U	10 U	10 U

Table B.2
Historical Soil Data within Study Area

Location	EPI-B-7	EPI-B-8	EPI-B-9	EPI-B-13	EPI-B-14
Sample ID	**EPI-B-7:8**	**EPI-B-8:8**	**EPI-B-9:8**	**EPI-B-13:10**	**EPI-B-14:10**
Depth	8-8 ft	8-8 ft	8-8 ft	9.5-9.5 ft	9.5-9.5 ft
Date	07/23/2004	07/23/2004	07/23/2004	10/25/2004	10/25/2004

Table B.2
Historical Soil Data within Study Area

	Location	ESS-B2	F-SB-1	F-SB-1	F-SB-2	F-SB-2
	Sample ID	**ESS-B2-6**	**F-SB-1-4**	**F-SB-1-8**	**F-SB-2-4**	**F-SB-2-8**
	Depth	6-7 ft	4-5 ft	8-9 ft	4-5 ft	8-9 ft
	Date	12/15/2011	07/19/2001	07/19/2001	07/19/2001	07/19/2001
BTEX						
Benzene	mg/kg	0.0014 U				
Ethylbenzene	mg/kg	0.0014 U				
Toluene	mg/kg	0.0069 U				
Xylene (meta & para)	mg/kg	0.0028 U				
Xylene (ortho)	mg/kg	0.0014 U				
Xylene (total)	mg/kg	0.0028 U				
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.0011 U	0.0012 U	0.0011 U	0.0011 U
Tetrachloroethene	mg/kg	0.0014 U		0.0012 U		0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.0014 U				
Trichloroethene	mg/kg	0.0014 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U
Vinyl chloride	mg/kg					
SVOCs						
Naphthalene	mg/kg	0.0014 U				
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0014 U				
1,1,1-Trichloroethane	mg/kg	0.0014 U				
1,1,2,2-Tetrachloroethane	mg/kg	0.0014 U				
1,1,2-Trichloroethane	mg/kg	0.0014 U				
1,1-Dichloroethane	mg/kg	0.0014 U				
1,1-Dichloroethene	mg/kg	0.0014 U				
1,1-Dichloropropene	mg/kg	0.0014 U				
1,2,3-Trichlorobenzene	mg/kg	0.0014 U				
1,2,3-Trichloropropane	mg/kg	0.0014 U				
1,2,4-Trichlorobenzene	mg/kg	0.0014 U				
1,2,4-Trimethylbenzene	mg/kg	0.0014 U				
1,2-Dibromo-3-chloropropane	mg/kg	0.0069 U				
1,2-Dibromoethane	mg/kg	0.0014 U				
1,2-Dichlorobenzene	mg/kg	0.0014 U	0.0011 U	0.0012 U	0.0011 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0014 U				
1,2-Dichloropropane	mg/kg	0.0014 U				
1,3,5-Trimethylbenzene	mg/kg	0.0014 U				
1,3-Dichlorobenzene	mg/kg	0.0014 U				
1,3-Dichloropropane	mg/kg	0.0014 U				
1,4-Dichlorobenzene	mg/kg	0.0014 U				
2,2-Dichloropropane	mg/kg	0.0014 U				
2-Chloroethyl vinyl ether	mg/kg	0.0069 U				
2-Chlorotoluene	mg/kg	0.0014 U				
2-Hexanone	mg/kg	0.0069 U				
4-Chlorotoluene	mg/kg	0.0014 U				
Acetone	mg/kg	0.4 J				
Bromobenzene	mg/kg	0.0014 U				
Bromochloromethane	mg/kg	0.0014 U				
Bromodichloromethane	mg/kg	0.0014 U				
Bromoform	mg/kg	0.0014 U				

Table B.2
Historical Soil Data within Study Area

	Location	ESS-B2	F-SB-1	F-SB-1	F-SB-2	F-SB-2
	Sample ID	**ESS-B2-6**	**F-SB-1-4**	**F-SB-1-8**	**F-SB-2-4**	**F-SB-2-8**
	Depth	6-7 ft	4-5 ft	8-9 ft	4-5 ft	8-9 ft
	Date	12/15/2011	07/19/2001	07/19/2001	07/19/2001	07/19/2001
VOCs						
Bromomethane	mg/kg	0.0014 U				
Carbon disulfide	mg/kg	0.0014 U				
Carbon tetrachloride	mg/kg	0.0014 U				
Chlorobenzene	mg/kg	0.0014 U				
Chloroethane	mg/kg	0.0069 U				
Chloroform	mg/kg	0.0014 U				
Chloromethane	mg/kg	0.0069 U				
cis-1,3-Dichloropropene	mg/kg	0.0014 U				
Cymene	mg/kg	0.0014 U				
Dibromochloromethane	mg/kg	0.0014 U				
Dibromomethane	mg/kg	0.0014 U				
Dichlorodifluoromethane	mg/kg	0.0014 U				
Hexachlorobutadiene	mg/kg	0.0069 U				
Iodomethane	mg/kg	0.0069 U				
Isopropylbenzene	mg/kg	0.0014 U				
Methyl ethyl ketone	mg/kg					
Methyl isobutyl ketone	mg/kg	0.0069 U				
Methylene chloride	mg/kg	0.0069 U	0.0054 U		0.0054 U	0.0057 U
Methyl-tert-butyl ether	mg/kg	0.0014 U				
n-Butylbenzene	mg/kg	0.0014 U				
n-Propylbenzene	mg/kg	0.0014 U				
sec-Butylbenzene	mg/kg	0.0014 U				
Styrene	mg/kg	0.0014 U				
tert-Butylbenzene	mg/kg	0.0014 U				
trans-1,3-Dichloropropene	mg/kg	0.0014 U				
Trichlorofluoromethane	mg/kg	0.0014 U				
Vinyl acetate	mg/kg	0.0069 U				

Table B.2
Historical Soil Data within Study Area

	Location	F-SB-3	F-SB-3	F-SB-4	F-SB-4	F-SB-5
	Sample ID	**F-SB-3-4**	**F-SB-3-8**	**F-SB-4-4**	**F-SB-4-8**	**F-SB5-0.33-3**
	Depth	4-5 ft	8-9 ft	4-5 ft	8-9 ft	0.33-3 ft
	Date	07/19/2001	07/19/2001	07/19/2001	07/19/2001	02/25/2002
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0013 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U
Tetrachloroethene	mg/kg		0.0011 U		0.0023 U	
trans-1,2-Dichloroethene	mg/kg					0.0011 U
Trichloroethene	mg/kg	0.0013 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U
Vinyl chloride	mg/kg					0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg					0.0011 U
1,1,1-Trichloroethane	mg/kg					0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg					0.0011 U
1,1,2-Trichloroethane	mg/kg					0.0011 U
1,1-Dichloroethane	mg/kg					0.0011 U
1,1-Dichloroethene	mg/kg					0.0011 U
1,1-Dichloropropene	mg/kg					0.0011 U
1,2,3-Trichlorobenzene	mg/kg					0.0011 U
1,2,3-Trichloropropane	mg/kg					0.0011 U
1,2,4-Trichlorobenzene	mg/kg					0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg					0.0056 U
1,2-Dibromoethane	mg/kg					0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0013 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U
1,2-Dichloroethane	mg/kg					0.0011 U
1,2-Dichloropropane	mg/kg					0.0011 U
1,3-Dichlorobenzene	mg/kg					0.0011 U
1,3-Dichloropropane	mg/kg					0.0011 U
1,4-Dichlorobenzene	mg/kg					0.0011 U
2,2-Dichloropropane	mg/kg					0.0011 U
2-Chloroethyl vinyl ether	mg/kg					0.0056 U
2-Chlorotoluene	mg/kg					0.0011 U
4-Chlorotoluene	mg/kg					0.0011 U
Bromobenzene	mg/kg					0.0011 U
Bromochloromethane	mg/kg					0.0011 U
Bromodichloromethane	mg/kg					0.0011 U
Bromoform	mg/kg					0.0011 U
Bromomethane	mg/kg					0.0056 U
Carbon tetrachloride	mg/kg					0.0011 U
Chlorobenzene	mg/kg					0.0011 U
Chloroethane	mg/kg					0.0011 U
Chloroform	mg/kg					0.0011 U
Chloromethane	mg/kg					0.0011 U
cis-1,3-Dichloropropene	mg/kg					0.0011 U
Dibromochloromethane	mg/kg					0.0011 U
Dibromomethane	mg/kg					0.0011 U
Dichlorodifluoromethane	mg/kg					0.0011 U
Hexachlorobutadiene	mg/kg					0.0056 U
Iodomethane	mg/kg					0.0056 U
Methylene chloride	mg/kg	0.0063 U	0.0055 U	0.0054 U		0.0056 U

Table B.2
Historical Soil Data within Study Area

	Location	F-SB-3	F-SB-3	F-SB-4	F-SB-4	F-SB-5
	Sample ID	**F-SB-3-4**	**F-SB-3-8**	**F-SB-4-4**	**F-SB-4-8**	**F-SB5-0.33-3**
	Depth	4-5 ft	8-9 ft	4-5 ft	8-9 ft	0.33-3 ft
	Date	07/19/2001	07/19/2001	07/19/2001	07/19/2001	02/25/2002
VOCs						
trans-1,3-Dichloropropene	mg/kg					0.0011 U
Trichlorofluoromethane	mg/kg					0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	F-SB-6	F-SB-7	GM-1	GM-2	GM-3
	Sample ID	**F-SB6-2-3**	**F-SB7-0.5-1.5**	**GM-1-5**	**GM-2-6**	**GM-3-10**
	Depth	2-3 ft	0.5-1.5 ft	5-7 ft	6-8 ft	10-12 ft
	Date	02/25/2002	02/25/2002	05/19/2009	05/19/2009	05/19/2009
BTEX						
Benzene	mg/kg			0.001 U	0.02 U	0.001 U
Ethylbenzene	mg/kg			0.001 U	0.036 U	0.001 U
Toluene	mg/kg			0.0051 U	0.036 U	0.0052 U
Xylene (meta & para)	mg/kg			0.002 U	0.036 U	0.0021 U
Xylene (ortho)	mg/kg			0.001 U	0.036 U	0.001 U
Xylene (total)	mg/kg			0.002 U	0.036 U	0.0021 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Trichloroethene	mg/kg		0.0011 U	0.001 U		0.001 U
Vinyl chloride	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Metals						
Arsenic	mg/kg				11 U	
Barium	mg/kg					
Cadmium	mg/kg				0.56 U	
Chromium	mg/kg					
Lead	mg/kg					
Mercury	mg/kg				0.28 U	
Selenium	mg/kg				11 U	
Silver	mg/kg				0.56 U	
SVOCs						
Naphthalene	mg/kg			0.001 U		0.001 U
TPHs						
Diesel-range organics	mg/kg			28 U	28 U	29 U
Gasoline-range organics	mg/kg			6 U	3.6 U	6.1 U
Oil-range organics	mg/kg					
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2,4-Trimethylbenzene	mg/kg			0.001 U		0.001 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0053 U	0.0054 U	0.0051 U		0.0052 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,3,5-Trimethylbenzene	mg/kg			0.001 U		0.001 U

Table B.2
Historical Soil Data within Study Area

	Location	F-SB-6	F-SB-7	GM-1	GM-2	GM-3
	Sample ID	**F-SB6-2-3**	**F-SB7-0.5-1.5**	**GM-1-5**	**GM-2-6**	**GM-3-10**
	Depth	2-3 ft	0.5-1.5 ft	5-7 ft	6-8 ft	10-12 ft
	Date	02/25/2002	02/25/2002	05/19/2009	05/19/2009	05/19/2009
VOCs						
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
2-Chloroethyl vinyl ether	mg/kg	0.0053 U	0.0054 U	0.01 U		0.01 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
2-Hexanone	mg/kg			0.0051 U		0.0052 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Acetone	mg/kg			0.0051 U		0.0052 U
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Bromoform	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Carbon disulfide	mg/kg			0.001 U		0.001 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Chloroethane	mg/kg	0.0011 U	0.0011 U	0.0051 U		0.0052 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Chloromethane	mg/kg	0.0011 U	0.0011 U	0.0051 U		0.0052 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Cymene	mg/kg			0.001 U		0.001 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Hexachlorobutadiene	mg/kg	0.0053 U	0.0054 U	0.0051 U		0.0052 U
Iodomethane	mg/kg	0.0053 U	0.0054 U	0.0051 U		0.0052 U
Isopropylbenzene	mg/kg			0.001 U		0.001 U
Methyl ethyl ketone	mg/kg			0.0051 U		0.0052 U
Methyl isobutyl ketone	mg/kg			0.0051 U		0.0052 U
Methylene chloride	mg/kg	0.0053 U	0.0054 U	0.0051 U		0.0052 U
Methyl-tert-butyl ether	mg/kg			0.001 U		0.001 U
n-Butylbenzene	mg/kg			0.001 U		0.001 U
n-Propylbenzene	mg/kg			0.001 U		0.001 U
sec-Butylbenzene	mg/kg			0.001 U		0.001 U
Styrene	mg/kg			0.001 U		0.001 U
tert-Butylbenzene	mg/kg			0.001 U		0.001 U
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.001 U		0.001 U
Vinyl acetate	mg/kg			0.0051 U		0.0052 U

Table B.2
Historical Soil Data within Study Area

	Location	GM-4	GM-5	GM-6	HWA-BH-2	HWA-BH-3
	Sample ID	**GM-4-5**	**GM-5-7**	**GM-6-6**	**HWA-BH-2-6**	**HWA-BH-3-6**
	Depth	5-7 ft	7-8 ft	6-8 ft	6-6.5 ft	6-6.5 ft
	Date	05/19/2009	05/19/2009	05/19/2009	07/09/2007	07/09/2007
BTEX						
Benzene	mg/kg	0.02 U	0.00096 U	0.00089 U	0.03 U	
Ethylbenzene	mg/kg	0.051 U	0.00096 U	0.00089 U	0.05 U	
Toluene	mg/kg	0.051 U	0.0048 U	0.0045 U	0.05 U	
Xylene (meta & para)	mg/kg	0.051 U	0.0019 U	0.0018 U		
Xylene (ortho)	mg/kg	0.051 U	0.00096 U	0.00089 U		
Xylene (total)	mg/kg	0.051 U	0.0019 U	0.0018 U	0.2 U	
cPAHs						
Benzo(a)anthracene	mg/kg					0.04 U
Benzo(a)pyrene	mg/kg					0.04 U
Benzo(b)fluoranthene	mg/kg					0.04 U
Benzo(k)fluoranthene	mg/kg					0.04 U
Chrysene	mg/kg					
cPAHs (MTCA TEQ-HalfND)	mg/kg					
cPAHs (MTCA TEQ-ZeroND)	mg/kg					
Dibenzo(a,h)anthracene	mg/kg					0.04 U
Indeno(1,2,3-c,d)pyrene	mg/kg					0.04 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.00096 U	0.00089 U		0.1 U
Tetrachloroethene	mg/kg		0.00096 U			0.1 U
trans-1,2-Dichloroethene	mg/kg		0.00096 U	0.00089 U		0.1 U
Trichloroethene	mg/kg		0.00096 U	0.00089 U		0.1 U
Vinyl chloride	mg/kg		0.00096 U	0.00089 U		0.1 U
Metals						
Arsenic	mg/kg	11 U	11 U	11 U		5 U
Barium	mg/kg					
Cadmium	mg/kg	0.56 U	0.54 U	0.56 U		1 U
Chromium	mg/kg					
Lead	mg/kg					5 U
Mercury	mg/kg	0.28 U	0.27 U	0.28 U		
Selenium	mg/kg	11 U	11 U	11 U		5 U
Silver	mg/kg	0.56 U	0.54 U	0.56 U		5 U
PCBs						
Aroclor 1016	mg/kg					0.1 U
Aroclor 1221	mg/kg					0.1 U
Aroclor 1232	mg/kg					0.1 U
Aroclor 1242	mg/kg					0.1 U
Aroclor 1248	mg/kg					0.1 U
Aroclor 1254	mg/kg					0.1 U
Aroclor 1260	mg/kg					0.1 U
PCBs (Total, Aroclors)	mg/kg					0.1 U
SVOCs						
1-Methylnaphthalene	mg/kg					
2-Methylnaphthalene	mg/kg					
Acenaphthene	mg/kg					
Acenaphthylene	mg/kg					

Table B.2
Historical Soil Data within Study Area

	Location	GM-4	GM-5	GM-6	HWA-BH-2	HWA-BH-3
	Sample ID	**GM-4-5**	**GM-5-7**	**GM-6-6**	**HWA-BH-2-6**	**HWA-BH-3-6**
	Depth	5-7 ft	7-8 ft	6-8 ft	6-6.5 ft	6-6.5 ft
	Date	05/19/2009	05/19/2009	05/19/2009	07/09/2007	07/09/2007
SVOCs						
Anthracene	mg/kg					
Benzo(g,h,i)perylene	mg/kg					0.04 U
Fluoranthene	mg/kg					
Fluorene	mg/kg					
Naphthalene	mg/kg		0.00096 U	0.00089 U		
Phenanthrene	mg/kg					
Pyrene	mg/kg					
TPHs						
Diesel-range organics	mg/kg	28 U	28 U	28 U	25 U	
Gasoline-range organics	mg/kg	5.1 U	4.6 U	5.8 U	3 U	
Oil-range organics	mg/kg				50 U	1000 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1,1-Trichloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1,2,2-Tetrachloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1,2-Trichloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1-Dichloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1-Dichloroethene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,1-Dichloropropene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2,3-Trichlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2,3-Trichloropropane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2,4-Trichlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2,4-Trimethylbenzene	mg/kg		0.00096 U	0.00089 U		
1,2-Dibromo-3-chloropropane	mg/kg		0.0048 U	0.0045 U		0.5 U
1,2-Dibromoethane	mg/kg		0.00096 U	0.00089 U		0.05 U
1,2-Dichlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2-Dichloroethane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,2-Dichloropropane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,3,5-Trimethylbenzene	mg/kg		0.00096 U	0.00089 U		
1,3-Dichlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
1,3-Dichloropropane	mg/kg		0.00096 U	0.00089 U		0.1 U
1,4-Dichlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
2,2-Dichloropropane	mg/kg		0.00096 U	0.00089 U		0.1 U
2-Chloroethyl vinyl ether	mg/kg		0.0096 U	0.0089 U		
2-Chlorotoluene	mg/kg		0.00096 U	0.00089 U		0.1 U
2-Hexanone	mg/kg		0.0048 U	0.0045 U		
4-Chlorotoluene	mg/kg		0.00096 U	0.00089 U		0.1 U
Acetone	mg/kg					
Bromobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
Bromochloromethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Bromodichloromethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Bromoform	mg/kg		0.00096 U	0.00089 U		0.1 U
Bromomethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Carbon disulfide	mg/kg		0.00096 U	0.00089 U		
Carbon tetrachloride	mg/kg		0.00096 U	0.00089 U		0.1 U

Table B.2
Historical Soil Data within Study Area

	Location	GM-4	GM-5	GM-6	HWA-BH-2	HWA-BH-3
	Sample ID	**GM-4-5**	**GM-5-7**	**GM-6-6**	**HWA-BH-2-6**	**HWA-BH-3-6**
	Depth	5-7 ft	7-8 ft	6-8 ft	6-6.5 ft	6-6.5 ft
	Date	05/19/2009	05/19/2009	05/19/2009	07/09/2007	07/09/2007
VOCs						
Chlorobenzene	mg/kg		0.00096 U	0.00089 U		0.1 U
Chloroethane	mg/kg		0.0048 U	0.0045 U		0.1 U
Chloroform	mg/kg		0.00096 U	0.00089 U		0.1 U
Chloromethane	mg/kg		0.0048 U	0.0045 U		0.1 U
cis-1,3-Dichloropropene	mg/kg		0.00096 U	0.00089 U		0.1 U
Cymene	mg/kg		0.00096 U	0.00089 U		
Dibromochloromethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Dibromomethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Dichlorodifluoromethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Hexachlorobutadiene	mg/kg		0.0048 U	0.0045 U		0.1 U
Iodomethane	mg/kg		0.0048 U	0.0045 U		
Isopropylbenzene	mg/kg		0.00096 U	0.00089 U		
Methyl ethyl ketone	mg/kg		0.0048 U	0.0045 U		
Methyl isobutyl ketone	mg/kg		0.0048 U	0.0045 U		
Methylene chloride	mg/kg		0.0048 U	0.0045 U		0.2 U
Methyl-tert-butyl ether	mg/kg		0.00096 U	0.00089 U		
n-Butylbenzene	mg/kg		0.00096 U	0.00089 U		
n-Propylbenzene	mg/kg		0.00096 U	0.00089 U		
sec-Butylbenzene	mg/kg		0.00096 U	0.00089 U		
Styrene	mg/kg		0.00096 U	0.00089 U		
tert-Butylbenzene	mg/kg		0.00096 U	0.00089 U		
trans-1,3-Dichloropropene	mg/kg		0.00096 U	0.00089 U		0.1 U
Trichlorofluoromethane	mg/kg		0.00096 U	0.00089 U		0.1 U
Vinyl acetate	mg/kg		0.0048 U	0.0045 U		

Table B.2
Historical Soil Data within Study Area

	Location	HWA-BH-13	HWA-BH-19	HWA-BH-20	HWA-BH-21	HWA-CH-B1
	Sample ID	**HWA-BH-13-6**	**HWA-BH-19-6**	**HWA-BH-20-6**	**HWA-BH-21-6**	**HWA-CH-B1-3**
	Depth	6-6.5 ft	6-6.5 ft	6-6.5 ft	6-6.5 ft	3-3 ft
	Date	07/09/2007	08/09/2007	08/09/2007	08/09/2007	09/30/2011
cVOCs						
cis-1,2-Dichloroethene	mg/kg			0.00061 U	0.027 U	0.0014 U
Tetrachloroethene	mg/kg			0.00061 U	0.027 U	
trans-1,2-Dichloroethene	mg/kg			0.00061 U	0.027 U	0.0014 U
Trichloroethene	mg/kg			0.00061 U	0.027 U	0.0014 U
Vinyl chloride	mg/kg			0.00061 U	0.027 U	0.0014 U
Metals						
Arsenic	mg/kg					
Barium	mg/kg					
Cadmium	mg/kg	1 U				
Chromium	mg/kg					
Lead	mg/kg					
Mercury	mg/kg					
Selenium	mg/kg	5 U				
Silver	mg/kg	5 U				
TPHs						
Diesel-range organics	mg/kg	25 U	30 U	29 U		
Gasoline-range organics	mg/kg		6.3 U		4.9 U	
Oil-range organics	mg/kg			57 U		
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1,1-Trichloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1,2,2-Tetrachloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1,2-Trichloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1-Dichloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1-Dichloroethene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,1-Dichloropropene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2,3-Trichlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2,3-Trichloropropane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2,4-Trichlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2-Dibromo-3-chloropropane	mg/kg			0.0031 U	0.14 U	0.0069 U
1,2-Dibromoethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2-Dichlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2-Dichloroethane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,2-Dichloropropane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,3-Dichlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
1,3-Dichloropropane	mg/kg			0.00061 U	0.027 U	0.0014 U
1,4-Dichlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
2,2-Dichloropropane	mg/kg			0.00061 U	0.027 U	0.0014 U
2-Chloroethyl vinyl ether	mg/kg			0.00061 U	0.027 U	0.0069 U
2-Chlorotoluene	mg/kg			0.00061 U	0.027 U	0.0014 U
4-Chlorotoluene	mg/kg			0.00061 U	0.027 U	0.0014 U
Bromobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
Bromochloromethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Bromodichloromethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Bromoform	mg/kg			0.00061 U	0.027 U	0.0014 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-BH-13	HWA-BH-19	HWA-BH-20	HWA-BH-21	HWA-CH-B1
	Sample ID	**HWA-BH-13-6**	**HWA-BH-19-6**	**HWA-BH-20-6**	**HWA-BH-21-6**	**HWA-CH-B1-3**
	Depth	6-6.5 ft	6-6.5 ft	6-6.5 ft	6-6.5 ft	3-3 ft
	Date	07/09/2007	08/09/2007	08/09/2007	08/09/2007	09/30/2011
VOCs						
Bromomethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Carbon tetrachloride	mg/kg			0.00061 U	0.027 U	0.0014 U
Chlorobenzene	mg/kg			0.00061 U	0.027 U	0.0014 U
Chloroethane	mg/kg			0.0031 U	0.14 U	0.0069 U
Chloroform	mg/kg			0.00061 U	0.027 U	0.0014 U
Chloromethane	mg/kg			0.00061 U	0.027 U	0.0069 U
cis-1,3-Dichloropropene	mg/kg			0.00061 U	0.027 U	0.0014 U
Dibromochloromethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Dibromomethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Dichlorodifluoromethane	mg/kg			0.00061 U	0.027 U	0.0014 U
Hexachlorobutadiene	mg/kg			0.0031 U	0.14 U	0.0069 U
Iodomethane	mg/kg			0.0031 U	0.14 U	0.0069 U
Methylene chloride	mg/kg				0.14 U	0.0069 U
trans-1,3-Dichloropropene	mg/kg			0.00061 U	0.027 U	0.0014 U
Trichlorofluoromethane	mg/kg			0.00061 U	0.027 U	0.0014 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-BH-3	HWA-BH-4	HWA-BH-5	HWA-BH-5	HWA-BH-6
	Sample ID	**HWA-BH-3-10**	**HWA-BH-4-6**	**HWA-BH-5-6**	**HWA-BH-5-10**	**HWA-BH-6-6**
	Depth	10-10.5 ft	6-6.5 ft	6-6.5 ft	10-10.5 ft	6-6.5 ft
	Date	07/09/2007	07/09/2007	07/09/2007	07/09/2007	07/10/2007
BTEX						
Benzene	mg/kg	0.03 U	0.3 U		0.03 U	0.03 U
Ethylbenzene	mg/kg	0.05 U			0.05 U	0.05 U
Toluene	mg/kg	0.05 U	0.5 U		0.05 U	0.05 U
Xylene (total)	mg/kg	0.2 U	2 U		0.2 U	0.2 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.1 U	0.1 U		
Tetrachloroethene	mg/kg		0.1 U	0.1 U		
trans-1,2-Dichloroethene	mg/kg		0.1 U	0.1 U		
Trichloroethene	mg/kg		0.1 U	0.1 U		
Vinyl chloride	mg/kg		0.1 U	0.1 U		
TPHs						
Diesel-range organics	mg/kg	25 U		25 U		25 U
Gasoline-range organics	mg/kg	3 U			3 U	3 U
Oil-range organics	mg/kg		50 U	50 U		50 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg		0.1 U	0.1 U		
1,1,1-Trichloroethane	mg/kg		0.1 U	0.1 U		
1,1,2,2-Tetrachloroethane	mg/kg		0.1 U	0.1 U		
1,1,2-Trichloroethane	mg/kg		0.1 U	0.1 U		
1,1-Dichloroethane	mg/kg		0.1 U	0.1 U		
1,1-Dichloroethene	mg/kg		0.1 U	0.1 U		
1,1-Dichloropropene	mg/kg		0.1 U	0.1 U		
1,2,3-Trichlorobenzene	mg/kg		0.1 U	0.1 U		
1,2,3-Trichloropropane	mg/kg		0.1 U	0.1 U		
1,2,4-Trichlorobenzene	mg/kg		0.1 U	0.1 U		
1,2-Dibromo-3-chloropropane	mg/kg		0.5 U	0.5 U		
1,2-Dibromoethane	mg/kg		0.05 U	0.05 U		
1,2-Dichlorobenzene	mg/kg		0.1 U	0.1 U		
1,2-Dichloroethane	mg/kg		0.1 U	0.1 U		
1,2-Dichloropropane	mg/kg		0.1 U	0.1 U		
1,3-Dichlorobenzene	mg/kg		0.1 U	0.1 U		
1,3-Dichloropropane	mg/kg		0.1 U	0.1 U		
1,4-Dichlorobenzene	mg/kg		0.1 U	0.1 U		
2,2-Dichloropropane	mg/kg		0.1 U	0.1 U		
2-Chlorotoluene	mg/kg		0.1 U	0.1 U		
4-Chlorotoluene	mg/kg		0.1 U	0.1 U		
Bromobenzene	mg/kg		0.1 U	0.1 U		
Bromochloromethane	mg/kg		0.1 U	0.1 U		
Bromodichloromethane	mg/kg		0.1 U	0.1 U		
Bromoform	mg/kg		0.1 U	0.1 U		
Bromomethane	mg/kg		0.1 U	0.1 U		
Carbon tetrachloride	mg/kg		0.1 U	0.1 U		
Chlorobenzene	mg/kg		0.1 U	0.1 U		
Chloroethane	mg/kg		0.1 U	0.1 U		
Chloroform	mg/kg		0.1 U	0.1 U		

Table B.2
Historical Soil Data within Study Area

	Location	HWA-BH-3	HWA-BH-4	HWA-BH-5	HWA-BH-5	HWA-BH-6
	Sample ID	**HWA-BH-3-10**	**HWA-BH-4-6**	**HWA-BH-5-6**	**HWA-BH-5-10**	**HWA-BH-6-6**
	Depth	10-10.5 ft	6-6.5 ft	6-6.5 ft	10-10.5 ft	6-6.5 ft
	Date	07/09/2007	07/09/2007	07/09/2007	07/09/2007	07/10/2007
VOCs						
Chloromethane	mg/kg		0.1 U	0.1 U		
cis-1,3-Dichloropropene	mg/kg		0.1 U	0.1 U		
Dibromochloromethane	mg/kg		0.1 U	0.1 U		
Dibromomethane	mg/kg		0.1 U	0.1 U		
Dichlorodifluoromethane	mg/kg		0.1 U	0.1 U		
Hexachlorobutadiene	mg/kg		0.1 U	0.1 U		
Methylene chloride	mg/kg		0.2 U	0.2 U		
trans-1,3-Dichloropropene	mg/kg		0.1 U	0.1 U		
Trichlorofluoromethane	mg/kg		0.1 U	0.1 U		

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B1	HWA-CH-B2	HWA-CH-B2	HWA-CH-B2	HWA-CH-B3
	Sample ID	**HWA-CH-B1-7**	**HWA-CH-B2-2**	**HWA-CH-B2-4**	**HWA-CH-B2-6**	**HWA-CH-B3-3**
	Depth	7-7 ft	2-2 ft	4-4 ft	6-6 ft	3-3 ft
	Date	09/30/2011	09/30/2011	09/30/2011	09/30/2011	09/30/2011
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Tetrachloroethene	mg/kg				0.0011 U	0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Trichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Vinyl chloride	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0056 U	0.0054 U	0.005 U	0.0056 U	0.0057 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0056 U	0.0054 U	0.0054 U	0.0056 U	0.0057 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Bromoform	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Chloroethane	mg/kg	0.0056 U	0.0054 U	0.0054 U	0.0056 U	0.0057 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Chloromethane	mg/kg	0.0056 U	0.0054 U	0.0054 U	0.0056 U	0.0057 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0056 U	0.0054 U	0.005 U	0.0056 U	0.0057 U
Iodomethane	mg/kg	0.0056 U	0.0054 U	0.0054 U	0.0056 U	0.0057 U
Methylene chloride	mg/kg	0.0056 U	0.0054 U		0.0056 U	0.0057 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B1	HWA-CH-B2	HWA-CH-B2	HWA-CH-B2	HWA-CH-B3
	Sample ID	**HWA-CH-B1-7**	**HWA-CH-B2-2**	**HWA-CH-B2-4**	**HWA-CH-B2-6**	**HWA-CH-B3-3**
	Depth	7-7 ft	2-2 ft	4-4 ft	6-6 ft	3-3 ft
	Date	09/30/2011	09/30/2011	09/30/2011	09/30/2011	09/30/2011
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B3	HWA-CH-B3	HWA-CH-B4	HWA-CH-B4	HWA-CH-B4
	Sample ID	**HWA-CH-B3-6**	**HWA-CH-B3-8**	**HWA-CH-B4-3**	**HWA-CH-B4-6**	**HWA-CH-B4-8**
	Depth	6-6 ft	8-8 ft	3-3 ft	6-6 ft	8-8 ft
	Date	09/30/2011	09/30/2011	09/30/2011	09/30/2011	09/30/2011
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Tetrachloroethene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Trichloroethene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Vinyl chloride	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
2-Chloroethyl vinyl ether	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Bromoform	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Chloroethane	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Chloromethane	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Hexachlorobutadiene	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
Iodomethane	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U
Methylene chloride	mg/kg	0.0056 U	0.0054 U	0.0065 U	0.006 U	0.0061 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B3	HWA-CH-B3	HWA-CH-B4	HWA-CH-B4	HWA-CH-B4
	Sample ID	**HWA-CH-B3-6**	**HWA-CH-B3-8**	**HWA-CH-B4-3**	**HWA-CH-B4-6**	**HWA-CH-B4-8**
	Depth	6-6 ft	8-8 ft	3-3 ft	6-6 ft	8-8 ft
	Date	09/30/2011	09/30/2011	09/30/2011	09/30/2011	09/30/2011
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.0013 U	0.0012 U	0.0012 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B9	HWA-CH-B9	HWA-HH-1	HWA-SB-N	HWA-SB-S
	Sample ID	**HWA-CH-B9-1.5**	**HWA-CH-B9-7**	**HWA-HH-1-4**	**HWA-SB-N**	**HWA-SB-S**
	Depth	1.5-1.5 ft	7-7 ft	4-4 ft	0-0.5 ft	0-0.5 ft
	Date	09/30/2011	09/30/2011	11/18/2011	11/21/2011	11/21/2011
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Tetrachloroethene	mg/kg	0.0012 U	0.0012 U			
trans-1,2-Dichloroethene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Trichloroethene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Vinyl chloride	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
1,2-Dibromoethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
2-Chlorotoluene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
4-Chlorotoluene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Bromobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Bromochloromethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Bromodichloromethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Bromoform	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Bromomethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Chlorobenzene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Chloroethane	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
Chloroform	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Chloromethane	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
cis-1,3-Dichloropropene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Dibromochloromethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Dibromomethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
Iodomethane	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U
Methylene chloride	mg/kg	0.0058 U	0.0059 U	0.0063 U	0.0056 U	0.0056 U

Table B.2
Historical Soil Data within Study Area

	Location	HWA-CH-B9	HWA-CH-B9	HWA-HH-1	HWA-SB-N	HWA-SB-S
	Sample ID	**HWA-CH-B9-1.5**	**HWA-CH-B9-7**	**HWA-HH-1-4**	**HWA-SB-N**	**HWA-SB-S**
	Depth	1.5-1.5 ft	7-7 ft	4-4 ft	0-0.5 ft	0-0.5 ft
	Date	09/30/2011	09/30/2011	11/18/2011	11/21/2011	11/21/2011
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0012 U	0.0012 U	0.0013 U	0.0011 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	Lot5-1	Lot5-2	Lot5-2	Lot5-3	Lot5-3
	Sample ID	**Lot5-1-15**	**Lot5-2-12**	**Lot5-2-18**	**Lot5-3-2.5**	**Lot5-3-10**
	Depth	15-15 ft	12-12 ft	18-18 ft	2.5-2.5 ft	10-10 ft
	Date	08/03/2015	08/03/2015	08/03/2015	08/03/2015	08/03/2015
cVOCs						
Tetrachloroethene	mg/kg		0.0012 U			

Table B.2
Historical Soil Data within Study Area

	Location	Lot5-4	Lot5-4	Lot5-5	Lot5-5	Lot5-5
	Sample ID	**Lot5-4-15**	**Lot5-4-18**	**Lot5-5-2.5**	**Lot5-5-17**	**Lot5-5-18.5**
	Depth	15-15 ft	18-18 ft	2.5-2.5 ft	17-17 ft	18.5-18.5 ft
	Date	08/03/2015	08/03/2015	08/03/2015	08/03/2015	08/03/2015
cVOCs						
Tetrachloroethene	mg/kg			0.0012 U	0.0012 U	

Table B.2
Historical Soil Data within Study Area

	Location	Lot5-6	Lot8-1	Lot8-1	Lot8-3	Lot8-3
	Sample ID	**Lot5-6-17.5**	**Lot8-1-2.5**	**Lot8-1-6**	**Lot8-3-5.5**	**Lot8-3-10**
	Depth	17.5-17.5 ft	2.5-2.5 ft	6-6 ft	5.5-5.5 ft	10-10 ft
	Date	08/03/2015	08/04/2015	08/04/2015	08/04/2015	08/04/2015
cVOCs						
Tetrachloroethene	mg/kg					

Table B.2
Historical Soil Data within Study Area

	Location	Lot8-4	Lot8-4	PP-1	PP-1	PP-2
	Sample ID	**Lot8-4-1.5**	**Lot8-4-8**	**PP-1-8.5**	**PP-1-12**	**PP-2-6**
	Depth	1.5-1.5 ft	8-8 ft	8.5-8.5 ft	12-12 ft	6-6 ft
	Date	08/04/2015	08/04/2015	10/14/2013	10/14/2013	10/14/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg				0.00068 U	0.00075 U
Tetrachloroethene	mg/kg	0.0012 U				
trans-1,2-Dichloroethene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Trichloroethene	mg/kg				0.00068 U	0.00075 U
Vinyl chloride	mg/kg			0.00063 U	0.00068 U	0.00075 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1,1-Trichloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1,2,2-Tetrachloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1,2-Trichloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1-Dichloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1-Dichloroethene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,1-Dichloropropene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2,3-Trichlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2,3-Trichloropropane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2,4-Trichlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2-Dibromo-3-chloropropane	mg/kg			0.0031 U	0.0034 U	0.0037 U
1,2-Dibromoethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2-Dichlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2-Dichloroethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,2-Dichloropropane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,3-Dichlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,3-Dichloropropane	mg/kg			0.00063 U	0.00068 U	0.00075 U
1,4-Dichlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
2,2-Dichloropropane	mg/kg			0.00063 U	0.00068 U	0.00075 U
2-Chloroethyl vinyl ether	mg/kg			0.0031 U	0.0034 U	0.0037 U
2-Chlorotoluene	mg/kg			0.00063 U	0.00068 U	0.00075 U
4-Chlorotoluene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Bromobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Bromochloromethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Bromodichloromethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Bromoform	mg/kg			0.00063 U	0.00068 U	0.00075 U
Bromomethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Carbon tetrachloride	mg/kg			0.00063 U	0.00068 U	0.00075 U
Chlorobenzene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Chloroethane	mg/kg			0.0031 U	0.0034 U	0.0037 U
Chloroform	mg/kg			0.00063 U	0.00068 U	0.00075 U
Chloromethane	mg/kg			0.0031 U	0.0034 U	0.0037 U
cis-1,3-Dichloropropene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Dibromochloromethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Dibromomethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Dichlorodifluoromethane	mg/kg			0.00063 U	0.00068 U	0.00075 U
Hexachlorobutadiene	mg/kg			0.0031 U	0.0034 U	0.0037 U
Iodomethane	mg/kg			0.0031 U	0.0034 U	0.0037 U
Methylene chloride	mg/kg			0.0031 U	0.0034 U	0.0037 U

Table B.2
Historical Soil Data within Study Area

		Lot8-4	Lot8-4	PP-1	PP-1	PP-2
	Sample ID	**Lot8-4-1.5**	**Lot8-4-8**	**PP-1-8.5**	**PP-1-12**	**PP-2-6**
	Depth	1.5-1.5 ft	8-8 ft	8.5-8.5 ft	12-12 ft	6-6 ft
	Date	08/04/2015	08/04/2015	10/14/2013	10/14/2013	10/14/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg			0.00063 U	0.00068 U	0.00075 U
Trichlorofluoromethane	mg/kg			0.00063 U	0.00068 U	0.00075 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-12	PP-12	PP-13	PP-13	PP-13
	Sample ID	**PP-12-5**	**PP-12-8.5**	**PP-13-2**	**PP-13-2-D**	**PP-13-8.5**
	Depth	5-5 ft	8.5-8.5 ft	2-2 ft	2-2 ft	8.5-8.5 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013
BTEX						
Benzene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Ethylbenzene	mg/kg	0.041 U	0.038 U	0.035 U	0.04 U	0.042 U
Toluene	mg/kg	0.041 U	0.038 U	0.035 U	0.04 U	0.042 U
Xylene (meta & para)	mg/kg	0.041 U	0.038 U	0.035 U	0.04 U	0.042 U
Xylene (ortho)	mg/kg	0.041 U	0.038 U	0.035 U	0.04 U	0.042 U
Xylene (total)	mg/kg	0.041 U	0.038 U	0.035 U	0.04 U	0.042 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Tetrachloroethene	mg/kg	0.00073 U		0.00068 U		0.00065 U
trans-1,2-Dichloroethene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Trichloroethene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Vinyl chloride	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
TPHs						
Gasoline-range organics	mg/kg	4.1 U	3.8 U	3.5 U	4 U	4.2 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1,1-Trichloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1,2-Trichloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1-Dichloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1-Dichloroethene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,1-Dichloropropene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2,3-Trichlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2,3-Trichloropropane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2,4-Trichlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
1,2-Dibromoethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2-Dichlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2-Dichloroethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,2-Dichloropropane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,3-Dichlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,3-Dichloropropane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
1,4-Dichlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
2,2-Dichloropropane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
2-Chloroethyl vinyl ether	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
2-Chlorotoluene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
4-Chlorotoluene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Bromobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Bromochloromethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Bromodichloromethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Bromoform	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Bromomethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Carbon tetrachloride	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Chlorobenzene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Chloroethane	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-12	PP-12	PP-13	PP-13	PP-13
	Sample ID	**PP-12-5**	**PP-12-8.5**	**PP-13-2**	**PP-13-2-D**	**PP-13-8.5**
	Depth	5-5 ft	8.5-8.5 ft	2-2 ft	2-2 ft	8.5-8.5 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013
VOCs						
Chloroform	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Chloromethane	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
cis-1,3-Dichloropropene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Dibromochloromethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Dibromomethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Dichlorodifluoromethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Hexachlorobutadiene	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
Iodomethane	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
Methylene chloride	mg/kg	0.0036 U	0.0032 U	0.0034 U	0.0035 U	0.0033 U
trans-1,3-Dichloropropene	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U
Trichlorofluoromethane	mg/kg	0.00073 U	0.00064 U	0.00068 U	0.00071 U	0.00065 U

Table B.2
Historical Soil Data within Study Area

		PP-14	PP-14	PP-15	PP-15	PP-15
	Sample ID	**PP-14-5**	**PP-14-9.5**	**PP-15-2.5**	**PP-15-3.5**	**PP-15-7.8**
	Depth	5-5 ft	9.5-9.5 ft	2.5-2.5 ft	3.5-3.5 ft	7.8-7.8 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00074 U		0.00063 U	0.00074 U	0.00069 U
Tetrachloroethene	mg/kg					0.00069 U
trans-1,2-Dichloroethene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Trichloroethene	mg/kg	0.00074 U		0.00063 U	0.00074 U	0.00069 U
Vinyl chloride	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1,1-Trichloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1,2-Trichloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1-Dichloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1-Dichloroethene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,1-Dichloropropene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2,3-Trichlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2,3-Trichloropropane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2,4-Trichlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
1,2-Dibromoethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2-Dichlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2-Dichloroethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,2-Dichloropropane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,3-Dichlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,3-Dichloropropane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
1,4-Dichlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
2,2-Dichloropropane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
2-Chloroethyl vinyl ether	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
2-Chlorotoluene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
4-Chlorotoluene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Bromobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Bromochloromethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Bromodichloromethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Bromoform	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Bromomethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Carbon tetrachloride	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Chlorobenzene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Chloroethane	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
Chloroform	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Chloromethane	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
cis-1,3-Dichloropropene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Dibromochloromethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Dibromomethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Dichlorodifluoromethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Hexachlorobutadiene	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
Iodomethane	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U
Methylene chloride	mg/kg	0.0037 U	0.0034 U	0.0032 U	0.0037 U	0.0035 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-14	PP-14	PP-15	PP-15	PP-15
	Sample ID	**PP-14-5**	**PP-14-9.5**	**PP-15-2.5**	**PP-15-3.5**	**PP-15-7.8**
	Depth	5-5 ft	9.5-9.5 ft	2.5-2.5 ft	3.5-3.5 ft	7.8-7.8 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U
Trichlorofluoromethane	mg/kg	0.00074 U	0.00069 U	0.00063 U	0.00074 U	0.00069 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-16	PP-16	PP-17	PP-17	PP-18
	Sample ID	**PP-16-3**	**PP-16-7.9**	**PP-17-1.5**	**PP-17-7.5**	**PP-18-5**
	Depth	3-3 ft	7.9-7.9 ft	1.5-1.5 ft	7.5-7.5 ft	5-5 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Tetrachloroethene	mg/kg	0.00098 U		0.00074 U	0.00075 U	
trans-1,2-Dichloroethene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Trichloroethene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Vinyl chloride	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1,1-Trichloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1,2-Trichloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1-Dichloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1-Dichloroethene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,1-Dichloropropene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2,3-Trichlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2,3-Trichloropropane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2,4-Trichlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
1,2-Dibromoethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2-Dichlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2-Dichloroethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,2-Dichloropropane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,3-Dichlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,3-Dichloropropane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
1,4-Dichlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
2,2-Dichloropropane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
2-Chloroethyl vinyl ether	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
2-Chlorotoluene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
4-Chlorotoluene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Bromobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Bromochloromethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Bromodichloromethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Bromoform	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Bromomethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Carbon tetrachloride	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Chlorobenzene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Chloroethane	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
Chloroform	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Chloromethane	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
cis-1,3-Dichloropropene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Dibromochloromethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Dibromomethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Dichlorodifluoromethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Hexachlorobutadiene	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
Iodomethane	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U
Methylene chloride	mg/kg	0.0049 U	0.0032 U	0.0037 U	0.0037 U	0.0032 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-16	PP-16	PP-17	PP-17	PP-18
	Sample ID	**PP-16-3**	**PP-16-7.9**	**PP-17-1.5**	**PP-17-7.5**	**PP-18-5**
	Depth	3-3 ft	7.9-7.9 ft	1.5-1.5 ft	7.5-7.5 ft	5-5 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U
Trichlorofluoromethane	mg/kg	0.00098 U	0.00063 U	0.00074 U	0.00075 U	0.00063 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-18	PP-19	PP-19	PP-20	PP-20
	Sample ID	**PP-18-6**	**PP-19-5**	**PP-19-7.5**	**PP-20-6**	**PP-20-10**
	Depth	6-6 ft	5-5 ft	7.5-7.5 ft	6-6 ft	10-10 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/17/2013	10/17/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Tetrachloroethene	mg/kg					0.00097 U
trans-1,2-Dichloroethene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Trichloroethene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Vinyl chloride	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1,1-Trichloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1,2-Trichloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1-Dichloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1-Dichloroethene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,1-Dichloropropene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2,3-Trichlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2,3-Trichloropropane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2,4-Trichlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
1,2-Dibromoethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2-Dichlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2-Dichloroethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,2-Dichloropropane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,3-Dichlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,3-Dichloropropane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
1,4-Dichlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
2,2-Dichloropropane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
2-Chloroethyl vinyl ether	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
2-Chlorotoluene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
4-Chlorotoluene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Bromobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Bromochloromethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Bromodichloromethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Bromoform	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Bromomethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Carbon tetrachloride	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Chlorobenzene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Chloroethane	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
Chloroform	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Chloromethane	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
cis-1,3-Dichloropropene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Dibromochloromethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Dibromomethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Dichlorodifluoromethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Hexachlorobutadiene	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
Iodomethane	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U
Methylene chloride	mg/kg	0.0038 U	0.0031 U	0.0037 U	0.0047 U	0.0049 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-18	PP-19	PP-19	PP-20	PP-20
	Sample ID	**PP-18-6**	**PP-19-5**	**PP-19-7.5**	**PP-20-6**	**PP-20-10**
	Depth	6-6 ft	5-5 ft	7.5-7.5 ft	6-6 ft	10-10 ft
	Date	10/16/2013	10/16/2013	10/16/2013	10/17/2013	10/17/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U
Trichlorofluoromethane	mg/kg	0.00076 U	0.00063 U	0.00074 U	0.00095 U	0.00097 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-2	PP-3	PP-3	PP-4	PP-4
	Sample ID	**PP-2-8.8**	**PP-3-5**	**PP-3-9**	**PP-4-1**	**PP-4-5.9**
	Depth	8.8-8.8 ft	5-5 ft	9-9 ft	1-1 ft	5.9-5.9 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Trichloroethene	mg/kg		0.00064 U		0.00057 U	0.00072 U
Vinyl chloride	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1,1-Trichloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1,2-Trichloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1-Dichloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1-Dichloroethene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,1-Dichloropropene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2,3-Trichlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2,3-Trichloropropane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2,4-Trichlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
1,2-Dibromoethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2-Dichlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2-Dichloroethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,2-Dichloropropane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,3-Dichlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,3-Dichloropropane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
1,4-Dichlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
2,2-Dichloropropane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
2-Chloroethyl vinyl ether	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
2-Chlorotoluene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
4-Chlorotoluene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Bromobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Bromochloromethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Bromodichloromethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Bromoform	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Bromomethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Carbon tetrachloride	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Chlorobenzene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Chloroethane	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
Chloroform	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Chloromethane	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
cis-1,3-Dichloropropene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Dibromochloromethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Dibromomethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Dichlorodifluoromethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Hexachlorobutadiene	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
Iodomethane	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U
Methylene chloride	mg/kg	0.0028 U	0.0032 U	0.0031 U	0.0029 U	0.0036 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-2	PP-3	PP-3	PP-4	PP-4
	Sample ID	**PP-2-8.8**	**PP-3-5**	**PP-3-9**	**PP-4-1**	**PP-4-5.9**
	Depth	8.8-8.8 ft	5-5 ft	9-9 ft	1-1 ft	5.9-5.9 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U
Trichlorofluoromethane	mg/kg	0.00057 U	0.00064 U	0.00063 U	0.00057 U	0.00072 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-21	PP-22	PP-22	PP-23	PP-23
	Sample ID	**PP-21-4**	**PP-22-10**	**PP-22-3**	**PP-23-6**	**PP-23-9**
	Depth	4-4 ft	10-10 ft	3-3 ft	6-6 ft	9-9 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/17/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Trichloroethene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Vinyl chloride	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
1,3-Dichloropropane	mg/kg		0.001 U	0.00093 U	0.001 U	0.00094 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
2-Chloroethyl vinyl ether	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
2-Chlorotoluene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
4-Chlorotoluene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Bromobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Bromochloromethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Bromodichloromethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Bromoform	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Bromomethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Carbon tetrachloride	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Chlorobenzene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Chloroethane	mg/kg	0.0055 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
Chloroform	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Chloromethane	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Dibromochloromethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Dibromomethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Hexachlorobutadiene	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
Iodomethane	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U
Methylene chloride	mg/kg	0.0053 U	0.0052 U	0.0046 U	0.005 U	0.0047 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-21	PP-22	PP-22	PP-23	PP-23
	Sample ID	**PP-21-4**	**PP-22-10**	**PP-22-3**	**PP-23-6**	**PP-23-9**
	Depth	4-4 ft	10-10 ft	3-3 ft	6-6 ft	9-9 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/17/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.001 U	0.00093 U	0.001 U	0.00094 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-24	PP-24	PP-25	PP-25	PP-26
	Sample ID	**PP-24-7**	**PP-24-10**	**PP-25-3**	**PP-25-7**	**PP-26-2**
	Depth	7-7 ft	10-10 ft	3-3 ft	7-7 ft	2-2 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/18/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.00096 U	0.00093 U	0.0011 U	0.00063 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Trichloroethene	mg/kg			0.00093 U	0.0011 U	0.00063 U
Vinyl chloride	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1,1-Trichloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1,2-Trichloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1-Dichloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1-Dichloroethene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,1-Dichloropropene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2,3-Trichlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2,3-Trichloropropane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2,4-Trichlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
1,2-Dibromoethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2-Dichlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2-Dichloroethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,2-Dichloropropane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,3-Dichlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,3-Dichloropropane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
1,4-Dichlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
2,2-Dichloropropane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
2-Chloroethyl vinyl ether	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
2-Chlorotoluene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
4-Chlorotoluene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Bromobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Bromochloromethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Bromodichloromethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Bromoform	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Bromomethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Carbon tetrachloride	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Chlorobenzene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Chloroethane	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
Chloroform	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Chloromethane	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
cis-1,3-Dichloropropene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Dibromochloromethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Dibromomethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Dichlorodifluoromethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Hexachlorobutadiene	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
Iodomethane	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U
Methylene chloride	mg/kg	0.0046 U	0.0048 U	0.0047 U	0.0056 U	0.0031 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-24	PP-24	PP-25	PP-25	PP-26
	Sample ID	**PP-24-7**	**PP-24-10**	**PP-25-3**	**PP-25-7**	**PP-26-2**
	Depth	7-7 ft	10-10 ft	3-3 ft	7-7 ft	2-2 ft
	Date	10/17/2013	10/17/2013	10/17/2013	10/17/2013	10/18/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U
Trichlorofluoromethane	mg/kg	0.00092 U	0.00096 U	0.00093 U	0.0011 U	0.00063 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-26	PP-27	PP-27	PP-28	PP-28
	Sample ID	**PP-26-7**	**PP-27-3**	**PP-27-7**	**PP-28-2**	**PP-28-7**
	Depth	7-7 ft	3-3 ft	7.8-7.8 ft	2-2 ft	7.5-7.5 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	10/18/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Trichloroethene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Vinyl chloride	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1,1-Trichloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1,2-Trichloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1-Dichloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1-Dichloroethene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,1-Dichloropropene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2,3-Trichlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2,3-Trichloropropane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2,4-Trichlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
1,2-Dibromoethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2-Dichlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2-Dichloroethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,2-Dichloropropane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,3-Dichlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,3-Dichloropropane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
1,4-Dichlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
2,2-Dichloropropane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
2-Chloroethyl vinyl ether	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
2-Chlorotoluene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
4-Chlorotoluene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Bromobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Bromochloromethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Bromodichloromethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Bromoform	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Bromomethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Carbon tetrachloride	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Chlorobenzene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Chloroethane	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
Chloroform	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Chloromethane	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
cis-1,3-Dichloropropene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Dibromochloromethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Dibromomethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Dichlorodifluoromethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Hexachlorobutadiene	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
Iodomethane	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U
Methylene chloride	mg/kg	0.0043 U	0.0034 U	0.0036 U	0.0035 U	0.0035 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-26	PP-27	PP-27	PP-28	PP-28
	Sample ID	**PP-26-7**	**PP-27-3**	**PP-27-7**	**PP-28-2**	**PP-28-7**
	Depth	7-7 ft	3-3 ft	7.8-7.8 ft	2-2 ft	7.5-7.5 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	10/18/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U
Trichlorofluoromethane	mg/kg	0.00085 U	0.00068 U	0.00071 U	0.00069 U	0.0007 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-29	PP-29	PP-30	PP-30	PSD-B1
	Sample ID	**PP-29-2**	**PP-29-6**	**PP-30-2**	**PP-30-7**	**PSD-B1-2**
	Depth	2-2 ft	6-6 ft	2.5-2.5 ft	7-7 ft	2-3 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	12/15/2011
BTEX						
Benzene	mg/kg					0.0011 U
Ethylbenzene	mg/kg					0.0011 U
Toluene	mg/kg					0.0056 U
Xylene (meta & para)	mg/kg					0.0022 U
Xylene (ortho)	mg/kg					0.0011 U
Xylene (total)	mg/kg					0.0022 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Tetrachloroethene	mg/kg					0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Trichloroethene	mg/kg	0.00065 U	0.00065 U		0.00079 U	0.0011 U
Vinyl chloride	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
SVOCs						
Naphthalene	mg/kg					0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2,4-Trimethylbenzene	mg/kg					0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
1,2-Dibromoethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,3,5-Trimethylbenzene	mg/kg					0.0011 U
1,3-Dichlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
2-Chlorotoluene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
2-Hexanone	mg/kg					0.0056 U
4-Chlorotoluene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Acetone	mg/kg					0.011 U
Bromobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Bromochloromethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Bromodichloromethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Bromoform	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-29	PP-29	PP-30	PP-30	PSD-B1
	Sample ID	**PP-29-2**	**PP-29-6**	**PP-30-2**	**PP-30-7**	**PSD-B1-2**
	Depth	2-2 ft	6-6 ft	2.5-2.5 ft	7-7 ft	2-3 ft
	Date	10/18/2013	10/18/2013	10/18/2013	10/18/2013	12/15/2011
VOCs						
Bromomethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Carbon disulfide	mg/kg					0.0011 U
Carbon tetrachloride	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Chlorobenzene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Chloroethane	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
Chloroform	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Chloromethane	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
cis-1,3-Dichloropropene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Cymene	mg/kg					0.0011 U
Dibromochloromethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Dibromomethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
Iodomethane	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
Isopropylbenzene	mg/kg					0.0011 U
Methyl ethyl ketone	mg/kg					0.0056 U
Methyl isobutyl ketone	mg/kg					0.0056 U
Methylene chloride	mg/kg	0.0033 U	0.0032 U	0.0032 U	0.0039 U	0.0056 U
Methyl-tert-butyl ether	mg/kg					0.0011 U
n-Butylbenzene	mg/kg					0.0011 U
n-Propylbenzene	mg/kg					0.0011 U
sec-Butylbenzene	mg/kg					0.0011 U
Styrene	mg/kg					0.0011 U
tert-Butylbenzene	mg/kg					0.0011 U
trans-1,3-Dichloropropene	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.00065 U	0.00065 U	0.00064 U	0.00079 U	0.0011 U
Vinyl acetate	mg/kg					0.0056 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-5	PP-5	PP-5	PP-6	PP-6
	Sample ID	**PP-5-6**	**PP-5-6-D**	**PP-5-7.5**	**PP-6-3**	**PP-6-6**
	Depth	7.5-7.5 ft	6-6 ft	7.5-7.5 ft	3-3 ft	6-6 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Trichloroethene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Vinyl chloride	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1,1-Trichloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1,2-Trichloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1-Dichloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1-Dichloroethene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,1-Dichloropropene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2,3-Trichlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2,3-Trichloropropane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2,4-Trichlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
1,2-Dibromoethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2-Dichlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2-Dichloroethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,2-Dichloropropane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,3-Dichlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,3-Dichloropropane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
1,4-Dichlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
2,2-Dichloropropane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
2-Chloroethyl vinyl ether	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
2-Chlorotoluene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
4-Chlorotoluene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Bromobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Bromochloromethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Bromodichloromethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Bromoform	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Bromomethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Carbon tetrachloride	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Chlorobenzene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Chloroethane	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
Chloroform	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Chloromethane	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
cis-1,3-Dichloropropene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Dibromochloromethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Dibromomethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Dichlorodifluoromethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Hexachlorobutadiene	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
Iodomethane	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U
Methylene chloride	mg/kg	0.0036 U	0.0031 U	0.0032 U	0.0034 U	0.0038 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-5	PP-5	PP-5	PP-6	PP-6
	Sample ID	**PP-5-6**	**PP-5-6-D**	**PP-5-7.5**	**PP-6-3**	**PP-6-6**
	Depth	7.5-7.5 ft	6-6 ft	7.5-7.5 ft	3-3 ft	6-6 ft
	Date	10/14/2013	10/14/2013	10/14/2013	10/14/2013	10/14/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U
Trichlorofluoromethane	mg/kg	0.00072 U	0.00062 U	0.00065 U	0.00068 U	0.00076 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-7	PP-7	PP-8	PP-8	PP-9
	Sample ID	**PP-7-5**	**PP-7-9.5**	**PP-8-4.5**	**PP-8-6**	**PP-9-5.8**
	Depth	5-5 ft	9.5-9.5 ft	4.5-4.5 ft	6-6 ft	5.8-5.8 ft
	Date	10/14/2013	10/14/2013	10/15/2013	10/15/2013	10/15/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.00069 U			0.00055 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Trichloroethene	mg/kg		0.00069 U			
Vinyl chloride	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1,1-Trichloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1,2-Trichloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1-Dichloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1-Dichloroethene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,1-Dichloropropene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2,3-Trichlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2,3-Trichloropropane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2,4-Trichlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
1,2-Dibromoethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2-Dichlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2-Dichloroethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,2-Dichloropropane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,3-Dichlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,3-Dichloropropane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
1,4-Dichlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
2,2-Dichloropropane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
2-Chloroethyl vinyl ether	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
2-Chlorotoluene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
4-Chlorotoluene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Bromobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Bromochloromethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Bromodichloromethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Bromoform	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Bromomethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Carbon tetrachloride	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Chlorobenzene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Chloroethane	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
Chloroform	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Chloromethane	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
cis-1,3-Dichloropropene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Dibromochloromethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Dibromomethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Dichlorodifluoromethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Hexachlorobutadiene	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
Iodomethane	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U
Methylene chloride	mg/kg	0.0031 U	0.0034 U	0.0034 U	0.0036 U	0.0028 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-7	PP-7	PP-8	PP-8	PP-9
	Sample ID	**PP-7-5**	**PP-7-9.5**	**PP-8-4.5**	**PP-8-6**	**PP-9-5.8**
	Depth	5-5 ft	9.5-9.5 ft	4.5-4.5 ft	6-6 ft	5.8-5.8 ft
	Date	10/14/2013	10/14/2013	10/15/2013	10/15/2013	10/15/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U
Trichlorofluoromethane	mg/kg	0.00061 U	0.00069 U	0.00068 U	0.00071 U	0.00055 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-9	PP-10	PP-10	PP-11	PP-11
	Sample ID	**PP-9-9.5**	**PP-10-1**	**PP-10-2.5**	**PP-11-2**	**PP-11-6.5**
	Depth	9.5-9.5 ft	1-1 ft	2.5-2.5 ft	2-2 ft	6.5-6.5 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Trichloroethene	mg/kg		0.00068 U	0.00065 U	0.00068 U	
Vinyl chloride	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1,1-Trichloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1,2-Trichloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1-Dichloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1-Dichloroethene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,1-Dichloropropene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2,3-Trichlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2,3-Trichloropropane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2,4-Trichlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
1,2-Dibromoethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2-Dichlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2-Dichloroethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,2-Dichloropropane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,3-Dichlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,3-Dichloropropane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
1,4-Dichlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
2,2-Dichloropropane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
2-Chloroethyl vinyl ether	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
2-Chlorotoluene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
4-Chlorotoluene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Bromobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Bromochloromethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Bromodichloromethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Bromoform	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Bromomethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Carbon tetrachloride	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Chlorobenzene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Chloroethane	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
Chloroform	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Chloromethane	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
cis-1,3-Dichloropropene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Dibromochloromethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Dibromomethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Dichlorodifluoromethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Hexachlorobutadiene	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
Iodomethane	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U
Methylene chloride	mg/kg	0.0031 U	0.0034 U	0.0032 U	0.0034 U	0.004 U

Table B.2
Historical Soil Data within Study Area

	Location	PP-9	PP-10	PP-10	PP-11	PP-11
	Sample ID	**PP-9-9.5**	**PP-10-1**	**PP-10-2.5**	**PP-11-2**	**PP-11-6.5**
	Depth	9.5-9.5 ft	1-1 ft	2.5-2.5 ft	2-2 ft	6.5-6.5 ft
	Date	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U
Trichlorofluoromethane	mg/kg	0.00063 U	0.00068 U	0.00065 U	0.00068 U	0.0008 U

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B1	PSD-B1	PSD-B2	PSD-B2	PSD-B2
	Sample ID	**PSD-B1-5**	**PSD-B1-8**	**PSD-B2-2**	**PSD-B2-5**	**PSD-B2-8**
	Depth	5-6 ft	8-9 ft	2-3 ft	5-6 ft	8-9 ft
	Date	12/15/2011	12/15/2011	12/15/2011	12/15/2011	12/15/2011
BTEX						
Benzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Ethylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Toluene	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Xylene (meta & para)	mg/kg	0.0028 U	0.0019 U	0.0026 U	0.0025 U	0.0022 U
Xylene (ortho)	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Xylene (total)	mg/kg	0.0028 U	0.0019 U	0.0026 U	0.0025 U	0.0022 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Tetrachloroethene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Trichloroethene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Vinyl chloride	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
SVOCs						
Naphthalene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2,4-Trimethylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
1,2-Dibromoethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,3,5-Trimethylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
2-Chlorotoluene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
2-Hexanone	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
4-Chlorotoluene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Acetone	mg/kg			0.013 U	0.012 U	
Bromobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Bromochloromethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Bromodichloromethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Bromoform	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B1	PSD-B1	PSD-B2	PSD-B2	PSD-B2
	Sample ID	**PSD-B1-5**	**PSD-B1-8**	**PSD-B2-2**	**PSD-B2-5**	**PSD-B2-8**
	Depth	5-6 ft	8-9 ft	2-3 ft	5-6 ft	8-9 ft
	Date	12/15/2011	12/15/2011	12/15/2011	12/15/2011	12/15/2011
VOCs						
Bromomethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Carbon disulfide	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Chlorobenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Chloroethane	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Chloroform	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Chloromethane	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
cis-1,3-Dichloropropene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Cymene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Dibromochloromethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Dibromomethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Iodomethane	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Isopropylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Methyl ethyl ketone	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	
Methyl isobutyl ketone	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Methylene chloride	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U
Methyl-tert-butyl ether	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
n-Butylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
n-Propylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
sec-Butylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Styrene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
tert-Butylbenzene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
trans-1,3-Dichloropropene	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0014 U	0.00097 U	0.0013 U	0.0012 U	0.0011 U
Vinyl acetate	mg/kg	0.0069 U	0.0049 U	0.0065 U	0.0062 U	0.0055 U

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B3	PSD-B3	PSD-B4	PSD-B4	PSD-B5
	Sample ID	**PSD-B3-3**	**PSD-B3-6**	**PSD-B4-2**	**PSD-B4-4**	**PSD-B5-3**
	Depth	3-4 ft	6-7 ft	2-3 ft	4-5 ft	3-4 ft
	Date	12/14/2011	12/14/2011	12/15/2011	12/15/2011	12/15/2011
BTEX						
Benzene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	
Ethylbenzene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Toluene	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
Xylene (meta & para)	mg/kg	0.0021 U	0.0022 U	0.003 U	0.0021 U	0.0023 U
Xylene (ortho)	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Xylene (total)	mg/kg	0.0021 U	0.0022 U	0.003 U	0.0021 U	0.0023 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U			0.0011 U
Tetrachloroethene	mg/kg			0.0015 U	0.0011 U	0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Trichloroethene	mg/kg				0.0011 U	0.0011 U
Vinyl chloride	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
SVOCs						
Naphthalene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0054 U	0.0054 U	0.55 U	0.38 U	0.0057 U
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,3,5-Trimethylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
2-Hexanone	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
Acetone	mg/kg	0.011 U	0.011 U	0.77 J	0.32 J	
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Bromoform	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B3	PSD-B3	PSD-B4	PSD-B4	PSD-B5
	Sample ID	**PSD-B3-3**	**PSD-B3-6**	**PSD-B4-2**	**PSD-B4-4**	**PSD-B5-3**
	Depth	3-4 ft	6-7 ft	2-3 ft	4-5 ft	3-4 ft
	Date	12/14/2011	12/14/2011	12/15/2011	12/15/2011	12/15/2011
VOCs						
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Carbon disulfide	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Chloroethane	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Chloromethane	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Cymene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0054 U	0.0054 U	0.55 U	0.38 U	0.0057 U
Iodomethane	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
Isopropylbenzene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Methyl ethyl ketone	mg/kg	0.0054 U	0.0054 U			
Methyl isobutyl ketone	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
Methylene chloride	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U
Methyl-tert-butyl ether	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
n-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
n-Propylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
sec-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	
Styrene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
tert-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.11 U	0.075 U	0.0011 U
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0011 U
Vinyl acetate	mg/kg	0.0054 U	0.0054 U	0.0074 U	0.0053 U	0.0057 U

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B5	PSD-B6	PSD-B6	Px-SB01	Px-SB02
	Sample ID	**PSD-B5-6**	**PSD-B6-3**	**PSD-B6-6**	**Px-SB01-SO-0140**	**Px-SB02-SO-0160**
	Depth	6-7 ft	3-4 ft	6-7 ft	14-14 ft	16-16 ft
	Date	12/15/2011	12/15/2011	12/15/2011	04/01/2010	03/31/2010
BTEX						
Benzene	mg/kg	0.00099 U	0.0012 U	0.0012 U	0.02 U	0.02 U
Ethylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U	0.055 U	0.059 U
Toluene	mg/kg	0.0049 U	0.0059 U	0.0062 U	0.055 U	0.059 U
Xylene (meta & para)	mg/kg	0.002 U	0.0023 U	0.0025 U	0.055 U	0.059 U
Xylene (ortho)	mg/kg	0.00099 U	0.0012 U	0.0012 U	0.055 U	0.059 U
Xylene (total)	mg/kg	0.002 U	0.0023 U	0.0025 U	0.055 U	0.059 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Tetrachloroethene	mg/kg		0.0012 U			
trans-1,2-Dichloroethene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Trichloroethene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Vinyl chloride	mg/kg	0.00099 U	0.0012 U	0.0012 U		
SVOCs						
Naphthalene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
TPHs						
Diesel-range organics	mg/kg				27 U	29 U
Gasoline-range organics	mg/kg				5.5 U	5.9 U
Oil-range organics	mg/kg				53 U	59 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1,1-Trichloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1,2,2-Tetrachloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1,2-Trichloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1-Dichloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1-Dichloroethene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,1-Dichloropropene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2,3-Trichlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2,3-Trichloropropane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2,4-Trichlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2,4-Trimethylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2-Dibromo-3-chloropropane	mg/kg	0.0049 U	0.0059 U	0.0062 U		
1,2-Dibromoethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2-Dichlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2-Dichloroethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,2-Dichloropropane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,3,5-Trimethylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,3-Dichlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,3-Dichloropropane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
1,4-Dichlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
2,2-Dichloropropane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
2-Chloroethyl vinyl ether	mg/kg	0.0049 U	0.0059 U	0.0062 U		
2-Chlorotoluene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
2-Hexanone	mg/kg	0.0049 U	0.0059 U	0.0062 U		
4-Chlorotoluene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Acetone	mg/kg	0.0099 U	0.012 U	0.012 U		

Table B.2
Historical Soil Data within Study Area

	Location	PSD-B5	PSD-B6	PSD-B6	Px-SB01	Px-SB02
	Sample ID	**PSD-B5-6**	**PSD-B6-3**	**PSD-B6-6**	**Px-SB01-SO-0140**	**Px-SB02-SO-0160**
	Depth	6-7 ft	3-4 ft	6-7 ft	14-14 ft	16-16 ft
	Date	12/15/2011	12/15/2011	12/15/2011	04/01/2010	03/31/2010
VOCs						
Bromobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Bromochloromethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Bromodichloromethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Bromoform	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Bromomethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Carbon disulfide	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Carbon tetrachloride	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Chlorobenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Chloroethane	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Chloroform	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Chloromethane	mg/kg	0.0049 U	0.0059 U	0.0062 U		
cis-1,3-Dichloropropene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Cymene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Dibromochloromethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Dibromomethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Dichlorodifluoromethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Hexachlorobutadiene	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Iodomethane	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Isopropylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Methyl ethyl ketone	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Methyl isobutyl ketone	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Methylene chloride	mg/kg	0.0049 U	0.0059 U	0.0062 U		
Methyl-tert-butyl ether	mg/kg	0.00099 U	0.0012 U	0.0012 U		
n-Butylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
n-Propylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
sec-Butylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Styrene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
tert-Butylbenzene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
trans-1,3-Dichloropropene	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Trichlorofluoromethane	mg/kg	0.00099 U	0.0012 U	0.0012 U		
Vinyl acetate	mg/kg	0.0049 U	0.0059 U	0.0062 U		

Table B.2
Historical Soil Data within Study Area

	Location	Px-SB03	Px-SB04	Px-SB05	Px-SB05	UCCB-1
	Sample ID	**Px-SB03-SO-0150**	**Px-SB04-SO-0010**	**Px-SB05-SO-0170**	**-SB05Dup-SO-01**	**UCCB1-25.5**
	Depth	15-15 ft	1-1 ft	17-17 ft	17-17 ft	25.5-25.5 ft
	Date	03/31/2010	03/31/2010	04/01/2010	04/01/2010	03/21/2017
BTEX						
Benzene	mg/kg	0.02 U	0.02 U			
Ethylbenzene	mg/kg	0.073 U	0.054 U			
Toluene	mg/kg	0.073 U	0.054 U			
Xylene (meta & para)	mg/kg	0.073 U	0.054 U			
Xylene (ortho)	mg/kg	0.073 U	0.054 U			
Xylene (total)	mg/kg	0.073 U	0.054 U			
cPAHs						
Benzo(a)anthracene	mg/kg		0.0073 U			
Benzo(a)pyrene	mg/kg		0.0073 U			
Benzo(b)fluoranthene	mg/kg					
Benzo(k)fluoranthene	mg/kg		0.0073 U			
Chrysene	mg/kg					
cPAHs (MTCA TEQ-HalfND)	mg/kg					
cPAHs (MTCA TEQ-ZeroND)	mg/kg					
Dibenzo(a,h)anthracene	mg/kg		0.0073 U			
Indeno(1,2,3-c,d)pyrene	mg/kg		0.0073 U			
cVOCs						
cis-1,2-Dichloroethene	mg/kg		0.034 U	0.0011 U	0.0011 U	
Tetrachloroethene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
trans-1,2-Dichloroethene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Trichloroethene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Vinyl chloride	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Metals						
Arsenic	mg/kg		11 U			
Cadmium	mg/kg		0.54 U			
Chromium	mg/kg					
Lead	mg/kg					
Mercury	mg/kg		0.27 U			
PCBs						
Aroclor 1016	mg/kg		0.054 U			
Aroclor 1221	mg/kg		0.054 U			
Aroclor 1232	mg/kg		0.054 U			
Aroclor 1242	mg/kg		0.054 U			
Aroclor 1248	mg/kg		0.054 U			
Aroclor 1254	mg/kg		0.054 U			
Aroclor 1260	mg/kg		0.054 U			
PCBs (Total, Aroclors)	mg/kg		0.054 U			
SVOCs						
1-Methylnaphthalene	mg/kg		0.0073 U			
2-Methylnaphthalene	mg/kg		0.0073 U			
Acenaphthene	mg/kg		0.0073 U			
Acenaphthylene	mg/kg		0.0073 U			
Anthracene	mg/kg		0.0073 U			
Benzo(g,h,i)perylene	mg/kg					
Fluoranthene	mg/kg					

Table B.2
Historical Soil Data within Study Area

	Location	Px-SB03	Px-SB04	Px-SB05	Px-SB05	UCCB-1
	Sample ID	**Px-SB03-SO-0150**	**Px-SB04-SO-0010**	**Px-SB05-SO-0170**	**x-SB05Dup-SO-01**	**UCCB1-25.5**
	Depth	15-15 ft	1-1 ft	17-17 ft	17-17 ft	25.5-25.5 ft
	Date	03/31/2010	03/31/2010	04/01/2010	04/01/2010	03/21/2017
SVOCs						
Fluorene	mg/kg		0.0073 U			
Naphthalene	mg/kg		0.0073 U			
Phenanthrene	mg/kg		0.0073 U			
Pyrene	mg/kg					
TPHs						
Diesel-range organics	mg/kg		27 U			
Gasoline-range organics	mg/kg	7.3 U	5.4 U			
Oil-range organics	mg/kg		54 U			
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1,1-Trichloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1,2,2-Tetrachloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1,2-Trichloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1-Dichloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1-Dichloroethene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,1-Dichloropropene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2,3-Trichlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2,3-Trichloropropane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2,4-Trichlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2-Dibromo-3-chloropropane	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
1,2-Dibromoethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2-Dichlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2-Dichloroethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,2-Dichloropropane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,3-Dichlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,3-Dichloropropane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
1,4-Dichlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
2,2-Dichloropropane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
2-Chloroethyl vinyl ether	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
2-Chlorotoluene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
4-Chlorotoluene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Bromobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Bromochloromethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Bromodichloromethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Bromoform	mg/kg		0.034 U	0.0011 U	0.0011 U	0.0048 U
Bromomethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Carbon tetrachloride	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Chlorobenzene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Chloroethane	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
Chloroform	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Chloromethane	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
cis-1,3-Dichloropropene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Dibromochloromethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Dibromomethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Dichlorodifluoromethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U

Table B.2
Historical Soil Data within Study Area

	Location	Px-SB03	Px-SB04	Px-SB05	Px-SB05	UCCB-1
	Sample ID	**Px-SB03-SO-0150**	**Px-SB04-SO-0010**	**Px-SB05-SO-0170**	**:-SB05Dup-SO-01**	**UCCB1-25.5**
	Depth	15-15 ft	1-1 ft	17-17 ft	17-17 ft	25.5-25.5 ft
	Date	03/31/2010	03/31/2010	04/01/2010	04/01/2010	03/21/2017
VOCs						
Hexachlorobutadiene	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
Iodomethane	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
Methylene chloride	mg/kg		0.17 U	0.0057 U	0.0056 U	0.0048 U
trans-1,3-Dichloropropene	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U
Trichlorofluoromethane	mg/kg		0.034 U	0.0011 U	0.0011 U	0.00096 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCB-2	UCCB-3	UCCB-4	UCCB-5	UCCB-8
	Sample ID	**UCCB2-27.5**	**UCCB3-32.5**	**UCCB4-25.0**	**UCCB5-36.0**	**UCCB8-25.0**
	Depth	25-25 ft	32.5-32.5 ft	25-25 ft	36-36 ft	25-25 ft
	Date	04/05/2017	03/24/2017	04/05/2017	03/22/2017	03/27/2017
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Tetrachloroethene	mg/kg				0.0011 U	
trans-1,2-Dichloroethene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Trichloroethene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Vinyl chloride	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0015 U	0.0011 U	0.0013 U	0.0011 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0015 U	0.0011 U	0.0013 U	0.0011 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0015 U	0.0011 U	0.0013 U	0.0011 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0077 U	0.0055 U	0.0066 U	0.0057 U	0.0056 U
1,2-Dibromoethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dichlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0058 U	0.0055 U	0.005 U	0.0057 U	0.0056 U
2-Chlorotoluene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
4-Chlorotoluene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromochloromethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromodichloromethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Bromoform	mg/kg	0.0058 U	0.0055 U	0.005 U	0.0057 U	0.0056 U
Bromomethane	mg/kg	0.0012 U	0.0018 U	0.001 U	0.0011 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Chlorobenzene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Chloroethane	mg/kg	0.0058 U	0.0055 U	0.005 U	0.0057 U	0.0056 U
Chloroform	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Chloromethane	mg/kg	0.0058 U	0.0055 U	0.005 U	0.0057 U	0.0056 U
cis-1,3-Dichloropropene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Dibromochloromethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Dibromomethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0021 U	0.0011 U	0.0018 U	0.0011 U	0.0011 U
Hexachlorobutadiene	mg/kg	0.0058 U	0.0055 U	0.005 U	0.0057 U	0.0056 U
Iodomethane	mg/kg	0.0058 U	0.013 U	0.005 U	0.01 U	0.0074 U
Methylene chloride	mg/kg	0.0084 U	0.0055 U	0.0072 U	0.0057 U	0.0074 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCB-2	UCCB-3	UCCB-4	UCCB-5	UCCB-8
	Sample ID	**UCCB2-27.5**	**UCCB3-32.5**	**UCCB4-25.0**	**UCCB5-36.0**	**UCCB8-25.0**
	Depth	25-25 ft	32.5-32.5 ft	25-25 ft	36-36 ft	25-25 ft
	Date	04/05/2017	03/24/2017	04/05/2017	03/22/2017	03/27/2017
VOCs						
trans-1,3-Dichloropropene	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0012 U	0.0011 U	0.001 U	0.0011 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCB-9	UCCB-10	UCCMW-1	UCCMW-2	UCCMW-3
	Sample ID	**UCCB9-35.5**	**UCCB10-11.0**	**UCCMW1-2.5-4**	**UCCMW2-5.5-7**	**UCCMW3-4.5-6**
	Depth	35.5-35.5 ft	11-11 ft	2.5-4 ft	5.5-7 ft	4.5-6 ft
	Date	03/22/2017	03/20/2017	02/19/2002	02/19/2002	02/25/2002
BTEX						
Benzene	mg/kg				0.011 U	
Ethylbenzene	mg/kg				0.057 U	
Toluene	mg/kg				0.057 U	
Xylene (meta & para)	mg/kg				0.057 U	
Xylene (ortho)	mg/kg				0.057 U	
Xylene (total)	mg/kg				0.057 U	
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Tetrachloroethene	mg/kg	0.0012 U	0.00088 U			
trans-1,2-Dichloroethene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Trichloroethene	mg/kg	0.0012 U	0.00088 U	0.0011 U		0.0013 U
Vinyl chloride	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
TPHs						
Gasoline-range organics	mg/kg				1800 U	
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1,1-Trichloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1,2-Trichloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1-Dichloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1-Dichloroethene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,1-Dichloropropene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2,3-Trichlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2,3-Trichloropropane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2,4-Trichlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0059 U	0.0044 U	0.0057 U	0.0057 U	0.0063 U
1,2-Dibromoethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2-Dichlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U		0.0013 U
1,2-Dichloroethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,2-Dichloropropane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,3-Dichlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,3-Dichloropropane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
1,4-Dichlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
2,2-Dichloropropane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
2-Chloroethyl vinyl ether	mg/kg	0.0059 U	0.0044 U	0.0057 U	0.0057 U	0.0063 U
2-Chlorotoluene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
4-Chlorotoluene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Bromobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Bromochloromethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Bromodichloromethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Bromoform	mg/kg	0.0059 U	0.0044 U	0.0011 U	0.0011 U	0.0013 U
Bromomethane	mg/kg	0.0019 U	0.00088 U	0.0011 U	0.0057 U	0.0013 U
Carbon tetrachloride	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Chlorobenzene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Chloroethane	mg/kg	0.0059 U	0.0044 U	0.0011 U	0.0011 U	0.0013 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCB-9	UCCB-10	UCCMW-1	UCCMW-2	UCCMW-3
	Sample ID	**UCCB9-35.5**	**UCCB10-11.0**	**UCCMW1-2.5-4**	**UCCMW2-5.5-7**	**UCCMW3-4.5-6**
	Depth	35.5-35.5 ft	11-11 ft	2.5-4 ft	5.5-7 ft	4.5-6 ft
	Date	03/22/2017	03/20/2017	02/19/2002	02/19/2002	02/25/2002
VOCs						
Chloroform	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Chloromethane	mg/kg	0.0059 U	0.0044 U	0.0011 U	0.0011 U	0.0013 U
cis-1,3-Dichloropropene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Dibromochloromethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Dibromomethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Dichlorodifluoromethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Hexachlorobutadiene	mg/kg	0.0059 U	0.0044 U	0.0057 U	0.0057 U	0.0063 U
Iodomethane	mg/kg	0.014 U	0.0044 U	0.0057 U	0.0057 U	0.0063 U
Methylene chloride	mg/kg	0.0059 U	0.0044 U	0.0057 U		0.0063 U
trans-1,3-Dichloropropene	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U
Trichlorofluoromethane	mg/kg	0.0012 U	0.00088 U	0.0011 U	0.0011 U	0.0013 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-29	UCCMW-29D	UCCMW-30D	UCCMW-30D	UCCMW-31D
	Sample ID	**UCCMW-29-8.5-9.5**	**CCMW-29D-42.5-4**	**CMW-30D-28.5-29**	**UCCMW-30D-35-36**	**CCMW-31D-10-10.**
	Depth	8.5-9.5 ft	42.5-43 ft	28.5-29.5 ft	35-36 ft	10-10.5 ft
	Date	06/24/2020	06/23/2020	06/25/2020	06/25/2020	06/24/2020
BTEX						
Benzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Ethylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Toluene	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Xylene (meta & para)	mg/kg	0.0022 U	0.0021 U	0.0022 U	0.0022 U	0.0018 U
Xylene (ortho)	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Xylene (total)	mg/kg	0.0022 U	0.0021 U	0.0022 U	0.0022 U	0.0018 U
Conventionals						
Fractional Organic Carbon	%					
Total Organic Carbon	%	0.05 U				0.05 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Tetrachloroethene	mg/kg		0.001 U	0.0011 U	0.0011 U	0.00089 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Trichloroethene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Vinyl chloride	mg/kg	0.000056 U	0.000052 U	0.000055 U	0.000054 U	0.000045 U
SVOCs						
Naphthalene	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
TPHs						
Diesel-range organics	mg/kg	64 U	53 U	64 U	60 U	62 U
Gasoline-range organics	mg/kg	25 U	21 U	26 U	24 U	25 U
Oil-range organics	mg/kg	130 U	110 U	130 U	120 U	130 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
1,2-Dibromoethane	mg/kg	0.000056 U	0.000052 U	0.000055 U	0.000054 U	0.000045 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,3,5-Trimethylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
2-Chloroethyl vinyl ether	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
2-Chlorotoluene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-29	UCCMW-29D	UCCMW-30D	UCCMW-30D	UCCMW-31D
	Sample ID	**UCCMW-29-8.5-9.5**	**CCMW-29D-42.5-4**	**CMW-30D-28.5-29**	**UCCMW-30D-35-36**	**CCMW-31D-10-10.**
	Depth	8.5-9.5 ft	42.5-43 ft	28.5-29.5 ft	35-36 ft	10-10.5 ft
	Date	06/24/2020	06/23/2020	06/25/2020	06/25/2020	06/24/2020
VOCs						
2-Hexanone	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
4-Chlorotoluene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Acetone	mg/kg	0.011 U	0.01 U	0.011 U	0.011 U	
Bromobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Bromochloromethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Bromodichloromethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Bromoform	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Bromomethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Carbon disulfide	mg/kg	0.0011 U		0.0011 U	0.0011 U	0.00089 U
Carbon tetrachloride	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Chlorobenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Chloroethane	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Chloroform	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Chloromethane	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Cymene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Dibromochloromethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Dibromomethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Hexachlorobenzene	mg/kg	0.042 U	0.035 U	0.043 U	0.04 U	0.042 U
Hexachlorobutadiene	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Hexachloroethane	mg/kg	0.042 U	0.035 U	0.043 U	0.04 U	0.042 U
Iodomethane	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Isopropylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Methyl ethyl ketone	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Methyl isobutyl ketone	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Methylene chloride	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U
Methyl-tert-butyl ether	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
n-Butylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Nitrobenzene	mg/kg	0.042 U	0.035 U	0.043 U	0.04 U	0.042 U
n-Propylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
sec-Butylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Styrene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
tert-Butylbenzene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.00089 U
Vinyl acetate	mg/kg	0.0056 U	0.0052 U	0.0055 U	0.0054 U	0.0045 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-31D	UCCMW-32	UCCMW-32	UCCMW-32D	UCCMW-32D
	Sample ID	**UCCMW-31D-20-21**	**UCCMW-32-17.5-18**	**UCCMW-99-17.5-18**	**UCCMW-32D-25.5-26**	**UCCMW-32D-39-40**
	Depth	20-21 ft	17.5-18.5 ft	17.5-18.5 ft	25.5-26.5 ft	39-40 ft
	Date	06/24/2020	06/29/2020	06/29/2020	06/29/2020	06/29/2020
BTEX						
Benzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Ethylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Toluene	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Xylene (meta & para)	mg/kg	0.0022 U	0.0022 U	0.0018 U	0.0021 U	0.0023 U
Xylene (ortho)	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Xylene (total)	mg/kg	0.0022 U	0.0022 U	0.0018 U	0.0021 U	0.0023 U
Conventionals						
Fractional Organic Carbon	%					
Total Organic Carbon	%					
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Tetrachloroethene	mg/kg		0.0011 U	0.00091 U	0.001 U	0.0012 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Trichloroethene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Vinyl chloride	mg/kg	0.000054 U			0.000052 U	0.000059 U
SVOCs						
Naphthalene	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
TPHs						
Diesel-range organics	mg/kg	63 U	62 U	60 U	63 U	60 U
Gasoline-range organics	mg/kg	25 U	25 U	24 U	25 U	24 U
Oil-range organics	mg/kg	130 U	120 U	120 U	130 U	120 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
1,2-Dibromoethane	mg/kg	0.000054 U	0.000054 U	0.000045 U	0.000052 U	0.000059 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,3,5-Trimethylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
2-Chloroethyl vinyl ether	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-31D	UCCMW-32	UCCMW-32	UCCMW-32D	UCCMW-32D
	Sample ID	**UCCMW-31D-20-21**	**UCCMW-32-17.5-18**	**UCCMW-99-17.5-18**	**UCCMW-32D-25.5-26**	**UCCMW-32D-39-40**
	Depth	20-21 ft	17.5-18.5 ft	17.5-18.5 ft	25.5-26.5 ft	39-40 ft
	Date	06/24/2020	06/29/2020	06/29/2020	06/29/2020	06/29/2020
VOCs						
2-Hexanone	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Acetone	mg/kg	0.011 U	0.011 U	0.0091 U	0.01 U	0.012 U
Bromobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Bromochloromethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Bromoform	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Bromomethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Carbon disulfide	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Chlorobenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Chloroethane	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Chloroform	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Chloromethane	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Cymene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Dibromomethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Hexachlorobenzene	mg/kg	0.042 U	0.041 U	0.04 U	0.042 U	0.04 U
Hexachlorobutadiene	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Hexachloroethane	mg/kg	0.042 U	0.041 U	0.04 U	0.042 U	0.04 U
Iodomethane	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Isopropylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Methyl ethyl ketone	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Methyl isobutyl ketone	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Methylene chloride	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U
Methyl-tert-butyl ether	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
n-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Nitrobenzene	mg/kg	0.042 U	0.041 U	0.04 U	0.042 U	0.04 U
n-Propylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
sec-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Styrene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
tert-Butylbenzene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U	0.00091 U	0.001 U	0.0012 U
Vinyl acetate	mg/kg	0.0054 U	0.0054 U	0.0045 U	0.0052 U	0.0059 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-33D	UCCMW-33D	UCCMW-34D	UCCMW-34D	UCCMW-35D
	Sample ID	**JCCMW-33D-23-24**	**CMW-33D-36.5-37**	**CMW-34D-29.8-30**	**UCCMW-34D-39-40**	**CMW-35D-30.5-31**
	Depth	23-24 ft	36.5-37.5 ft	29.8-30.5 ft	39-40 ft	30.5-31.5 ft
	Date	06/24/2020	06/25/2020	06/25/2020	06/26/2020	06/30/2020
BTEX						
Benzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Ethylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Toluene	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Xylene (meta & para)	mg/kg	0.0022 U	0.0019 U	0.0018 U	0.0018 U	0.0021 U
Xylene (ortho)	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Xylene (total)	mg/kg	0.0022 U	0.0019 U	0.0018 U	0.0018 U	0.0021 U
Conventionals						
Fractional Organic Carbon	%					
Total Organic Carbon	%	0.05 U	0.05 U			
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Tetrachloroethene	mg/kg	0.0011 U	0.00097 U	0.0009 U		0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Trichloroethene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Vinyl chloride	mg/kg	0.000056 U	0.000048 U	0.000045 U	0.000045 U	0.000053 U
SVOCs						
Naphthalene	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
TPHs						
Diesel-range organics	mg/kg	62 U	60 U			60 U
Gasoline-range organics	mg/kg	25 U	24 U			24 U
Oil-range organics	mg/kg	120 U	120 U			120 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2,4-Trimethylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
1,2-Dibromoethane	mg/kg	0.000056 U	0.000048 U	0.000045 U	0.000045 U	0.000053 U
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,3,5-Trimethylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
2-Chlorotoluene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-33D	UCCMW-33D	UCCMW-34D	UCCMW-34D	UCCMW-35D
	Sample ID	**JCCMW-33D-23-24**	**CMW-33D-36.5-3**	**CMW-34D-29.8-3**	**UCCMW-34D-39-4**	**CMW-35D-30.5-3**
	Depth	23-24 ft	36.5-37.5 ft	29.8-30.5 ft	39-40 ft	30.5-31.5 ft
	Date	06/24/2020	06/25/2020	06/25/2020	06/26/2020	06/30/2020
VOCs						
2-Hexanone	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
4-Chlorotoluene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Acetone	mg/kg	0.011 U	0.0097 U		0.0091 U	0.011 U
Bromobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Bromochloromethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Bromodichloromethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Bromoform	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Bromomethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Carbon disulfide	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Carbon tetrachloride	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Chlorobenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Chloroethane	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Chloroform	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Chloromethane	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Cymene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Dibromochloromethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Dibromomethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Hexachlorobenzene	mg/kg	0.041 U	0.04 U	0.042 U	0.042 U	0.04 U
Hexachlorobutadiene	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Hexachloroethane	mg/kg	0.041 U	0.04 U	0.042 U	0.042 U	0.04 U
Iodomethane	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Isopropylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Methyl ethyl ketone	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Methyl isobutyl ketone	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Methylene chloride	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U
Methyl-tert-butyl ether	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
n-Butylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Nitrobenzene	mg/kg	0.041 U	0.04 U	0.042 U	0.042 U	0.04 U
n-Propylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
sec-Butylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Styrene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
tert-Butylbenzene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.0011 U	0.00097 U	0.0009 U	0.00091 U	0.0011 U
Vinyl acetate	mg/kg	0.0056 U	0.0048 U	0.0045 U	0.0045 U	0.0053 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-36D	UCCMW-36D	UST-B-7.5	UST-ES-5	UST-NS-5
	Sample ID	**UCCMW-36D-2-3**	**CCMW-36D-10.5-1**	**UST-B-7.5**	**UST-ES-5**	**UST-NS-5**
	Depth	2-3 ft	10.5-11.5 ft	7.5-7.5 ft	5-5 ft	5-5 ft
	Date	06/30/2020	06/30/2020	11/17/2015	11/17/2015	11/17/2015
BTEX						
Benzene	mg/kg					
Ethylbenzene	mg/kg					
Toluene	mg/kg	0.26 U	0.005 U			
Xylene (meta & para)	mg/kg		0.002 U			
Xylene (ortho)	mg/kg		0.00099 U			
Xylene (total)	mg/kg		0.002 U			
Conventionals						
Fractional Organic Carbon	%					
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Tetrachloroethene	mg/kg	0.052 U	0.00099 U			
trans-1,2-Dichloroethene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Trichloroethene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Vinyl chloride	mg/kg	0.0026 U	0.00005 U	0.001 U	0.001 U	0.0012 U
SVOCs						
Naphthalene	mg/kg		0.005 U			
TPHs						
Diesel-range organics	mg/kg	490 CN	60 U			
Gasoline-range organics	mg/kg		24 U			
Oil-range organics	mg/kg		120 U	55 U	55 U	55 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1,1-Trichloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1,2,2-Tetrachloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1,2-Trichloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1-Dichloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1-Dichloroethene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,1-Dichloropropene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2,3-Trichloropropane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2,4-Trichlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2,4-Trimethylbenzene	mg/kg					
1,2-Dibromo-3-chloropropane	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
1,2-Dibromoethane	mg/kg	0.0026 U	0.00005 U	0.001 U	0.001 U	0.0012 U
1,2-Dichlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2-Dichloroethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,2-Dichloropropane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,3,5-Trimethylbenzene	mg/kg		0.00099 U			
1,3-Dichlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,3-Dichloropropane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
1,4-Dichlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
2,2-Dichloropropane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
2-Chloroethyl vinyl ether	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
2-Chlorotoluene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
2-Hexanone	mg/kg	0.26 U	0.005 U			

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-36D	UCCMW-36D	UST-B-7.5	UST-ES-5	UST-NS-5
	Sample ID	**UCCMW-36D-2-3**	**CCMW-36D-10.5-11**	**UST-B-7.5**	**UST-ES-5**	**UST-NS-5**
	Depth	2-3 ft	10.5-11.5 ft	7.5-7.5 ft	5-5 ft	5-5 ft
	Date	06/30/2020	06/30/2020	11/17/2015	11/17/2015	11/17/2015
VOCs						
4-Chlorotoluene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Acetone	mg/kg	0.52 U				
Bromobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Bromochloromethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Bromodichloromethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Bromoform	mg/kg	0.26 U	0.005 U	0.001 U	0.001 U	0.0012 U
Bromomethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Carbon disulfide	mg/kg	0.052 U	0.00099 U			
Carbon tetrachloride	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Chlorobenzene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Chloroethane	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
Chloroform	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Chloromethane	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
cis-1,3-Dichloropropene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Cymene	mg/kg		0.00099 U			
Dibromochloromethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Dibromomethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Dichlorodifluoromethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Hexachlorobenzene	mg/kg	1.7 U	0.04 U			
Hexachlorobutadiene	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
Hexachloroethane	mg/kg	1.7 U	0.04 U			
Iodomethane	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
Isopropylbenzene	mg/kg					
Methyl ethyl ketone	mg/kg	0.26 U	0.005 U			
Methyl isobutyl ketone	mg/kg	0.26 U	0.005 U			
Methylene chloride	mg/kg	0.26 U	0.005 U	0.0052 U	0.0051 U	0.0058 U
Methyl-tert-butyl ether	mg/kg	0.052 U	0.00099 U			
n-Butylbenzene	mg/kg					
Nitrobenzene	mg/kg	1.7 U	0.04 U			
n-Propylbenzene	mg/kg					
sec-Butylbenzene	mg/kg		0.00099 U			
Styrene	mg/kg	0.052 U	0.00099 U			
tert-Butylbenzene	mg/kg	0.052 U	0.00099 U			
trans-1,3-Dichloropropene	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Trichlorofluoromethane	mg/kg	0.052 U	0.00099 U	0.001 U	0.001 U	0.0012 U
Vinyl acetate	mg/kg	0.26 U	0.005 U			

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-6	UCCMW-9	UCCMW-28D
	Sample ID	**UCC MW-4D-32.5**	**UCC MW-4D-40**	**UCC MW-6-15**	**UCC MW-9-16**	**CCMW-28D-35.5-36**
	Depth	32.5-33.5 ft	40-41 ft	15-16 ft	16-17 ft	35.5-36.5 ft
	Date	01/09/2014	01/09/2014	01/08/2014	01/08/2014	07/01/2020
BTEX						
Benzene	mg/kg	0.02 U	0.02 U	0.02 U	0.02 U	0.0011 U
Ethylbenzene	mg/kg	0.068 U	0.052 U	0.04 U	0.042 U	0.0011 U
Toluene	mg/kg	0.068 U	0.052 U	0.04 U	0.042 U	0.0053 U
Xylene (meta & para)	mg/kg	0.068 U	0.052 U	0.04 U	0.042 U	0.0021 U
Xylene (ortho)	mg/kg	0.068 U	0.052 U	0.04 U	0.042 U	0.0011 U
Xylene (total)	mg/kg					0.0021 U
Conventionals						
Fractional Organic Carbon	%					0.1 U
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Tetrachloroethene	mg/kg		0.00082 U			0.0011 U
trans-1,2-Dichloroethene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Trichloroethene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Vinyl chloride	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.000053 U
SVOCs						
Naphthalene	mg/kg					0.0053 U
TPHs						
Diesel-range organics	mg/kg					60 U
Gasoline-range organics	mg/kg	6.8 U	5.2 U	4 U	4.2 U	24 U
Oil-range organics	mg/kg					120 U
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1,1-Trichloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1,2-Trichloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1-Dichloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1-Dichloroethene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,1-Dichloropropene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2,3-Trichlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2,3-Trichloropropane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2,4-Trichlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2,4-Trimethylbenzene	mg/kg					0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
1,2-Dibromoethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.000053 U
1,2-Dichlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2-Dichloroethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,2-Dichloropropane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,3,5-Trimethylbenzene	mg/kg					0.0011 U
1,3-Dichlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,3-Dichloropropane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
1,4-Dichlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
2,2-Dichloropropane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
2-Chloroethyl vinyl ether	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
2-Chlorotoluene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
2-Hexanone	mg/kg					0.0053 U

Table B.2
Historical Soil Data within Study Area

	Location	UCCMW-4D	UCCMW-4D	UCCMW-6	UCCMW-9	UCCMW-28D
	Sample ID	**UCC MW-4D-32.5**	**UCC MW-4D-40**	**UCC MW-6-15**	**UCC MW-9-16**	**CCMW-28D-35.5-3**
	Depth	32.5-33.5 ft	40-41 ft	15-16 ft	16-17 ft	35.5-36.5 ft
	Date	01/09/2014	01/09/2014	01/08/2014	01/08/2014	07/01/2020
VOCs						
4-Chlorotoluene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Acetone	mg/kg					0.011 U
Bromobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Bromochloromethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Bromodichloromethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Bromoform	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0053 U
Bromomethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Carbon disulfide	mg/kg					0.0011 U
Carbon tetrachloride	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Chlorobenzene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Chloroethane	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
Chloroform	mg/kg		0.00082 U	0.00089 U	0.00089 U	0.0011 U
Chloromethane	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
cis-1,3-Dichloropropene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Cymene	mg/kg					0.0011 U
Dibromochloromethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Dibromomethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Dichlorodifluoromethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0014 U
Hexachlorobenzene	mg/kg					0.04 U
Hexachlorobutadiene	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
Hexachloroethane	mg/kg					0.04 U
Iodomethane	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
Isopropylbenzene	mg/kg					0.0011 U
Methyl ethyl ketone	mg/kg					0.0053 U
Methyl isobutyl ketone	mg/kg					0.0053 U
Methylene chloride	mg/kg	0.0048 U	0.0041 U	0.0044 U	0.0045 U	0.0053 U
Methyl-tert-butyl ether	mg/kg					0.0011 U
n-Butylbenzene	mg/kg					0.0011 U
Nitrobenzene	mg/kg					0.04 U
n-Propylbenzene	mg/kg					0.0011 U
sec-Butylbenzene	mg/kg					0.0011 U
Styrene	mg/kg					0.0011 U
tert-Butylbenzene	mg/kg					0.0011 U
trans-1,3-Dichloropropene	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Trichlorofluoromethane	mg/kg	0.00095 U	0.00082 U	0.00089 U	0.00089 U	0.0011 U
Vinyl acetate	mg/kg					0.0053 U

Table B.2
Historical Soil Data within Study Area

	Location	UST-SS-5	UST-WS-5			
	Sample ID	**UST-SS-5**	**UST-WS-5**			
	Depth	5-5 ft	5-5 ft			
	Date	11/17/2015	11/17/2015			
cVOCs						
cis-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U			
Tetrachloroethene	mg/kg					
trans-1,2-Dichloroethene	mg/kg	0.0011 U	0.0011 U			
Trichloroethene	mg/kg	0.0011 U	0.0011 U			
Vinyl chloride	mg/kg	0.0011 U	0.0011 U			
TPHs						
Diesel-range organics	mg/kg	28 U	27 U			
Oil-range organics	mg/kg	57 U	55 U			
VOCs						
1,1,1,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U			
1,1,1-Trichloroethane	mg/kg	0.0011 U	0.0011 U			
1,1,2,2-Tetrachloroethane	mg/kg	0.0011 U	0.0011 U			
1,1,2-Trichloroethane	mg/kg	0.0011 U	0.0011 U			
1,1-Dichloroethane	mg/kg	0.0011 U	0.0011 U			
1,1-Dichloroethene	mg/kg	0.0011 U	0.0011 U			
1,1-Dichloropropene	mg/kg	0.0011 U	0.0011 U			
1,2,3-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U			
1,2,3-Trichloropropane	mg/kg	0.0011 U	0.0011 U			
1,2,4-Trichlorobenzene	mg/kg	0.0011 U	0.0011 U			
1,2-Dibromo-3-chloropropane	mg/kg	0.0053 U	0.0055 U			
1,2-Dibromoethane	mg/kg	0.0011 U	0.0011 U			
1,2-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U			
1,2-Dichloroethane	mg/kg	0.0011 U	0.0011 U			
1,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U			
1,3-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U			
1,3-Dichloropropane	mg/kg	0.0011 U	0.0011 U			
1,4-Dichlorobenzene	mg/kg	0.0011 U	0.0011 U			
2,2-Dichloropropane	mg/kg	0.0011 U	0.0011 U			
2-Chloroethyl vinyl ether	mg/kg	0.0053 U	0.0055 U			
2-Chlorotoluene	mg/kg	0.0011 U	0.0011 U			
4-Chlorotoluene	mg/kg	0.0011 U	0.0011 U			
Bromobenzene	mg/kg	0.0011 U	0.0011 U			
Bromochloromethane	mg/kg	0.0011 U	0.0011 U			
Bromodichloromethane	mg/kg	0.0011 U	0.0011 U			
Bromoform	mg/kg	0.0011 U	0.0011 U			
Bromomethane	mg/kg	0.0011 U	0.0011 U			
Carbon tetrachloride	mg/kg	0.0011 U	0.0011 U			
Chlorobenzene	mg/kg	0.0011 U	0.0011 U			
Chloroethane	mg/kg	0.0053 U	0.0055 U			
Chloroform	mg/kg	0.0011 U	0.0011 U			
Chloromethane	mg/kg	0.0053 U	0.0055 U			
cis-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U			
Dibromochloromethane	mg/kg	0.0011 U	0.0011 U			
Dibromomethane	mg/kg	0.0011 U	0.0011 U			
Dichlorodifluoromethane	mg/kg	0.0011 U	0.0011 U			

Table B.2
Historical Soil Data within Study Area

	Location	UST-SS-5	UST-WS-5			
	Sample ID	**UST-SS-5**	**UST-WS-5**			
	Depth	5-5 ft	5-5 ft			
	Date	11/17/2015	11/17/2015			
VOCs						
Hexachlorobutadiene	mg/kg	0.0053 U	0.0055 U			
Iodomethane	mg/kg	0.0053 U	0.0055 U			
Methylene chloride	mg/kg	0.0053 U	0.0055 U			
trans-1,3-Dichloropropene	mg/kg	0.0011 U	0.0011 U			
Trichlorofluoromethane	mg/kg	0.0011 U	0.0011 U			

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Groundwater						
December 2009 Unknown Groundwater Monitoring: Bothell Landing	BB-3	BB-3-122009	12/18/2009	EPA 8260	1	Changed final qualifier to U because UseResult=ReportingLimit
September 2011 HWA Subsurface Investigation: Ultra Cleaners	HWA-CH-B1	HWA-CH-B1-W	9/30/2011	EPA 8260	43	Changed final qualifier to U because UseResult=ReportingLimit
	HWA-CH-B11	HWA-CH-B11-W	9/30/2011	EPA 8260	46	Apparent error in Environmental Information Management (EIM) corrected following verification with original laboratory Electronic Data Deliverables (EDDs) from representative events
	HWA-CH-B12	HWA-CH-B12-W	9/30/2011	EPA 8260	46	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B13	HWA-CH-B13-W	9/30/2011	EPA 8260	46	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-W	9/30/2011	EPA 8260	43	Changed final qualifier to U because UseResult=ReportingLimit
	HWA-CH-B3	HWA-CH-B3-W	9/30/2011	EPA 8260	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-W	9/30/2011	EPA 8260	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
2013 Soil and Groundwater Subsurface Investigation	PP-23	PP-23-W	10/17/2013	EPA 8260C	1	Changed final qualifier to U because UseResult=ReportingLimit
June 2014 Area-Wide Quarterly Groundwater Monitoring	BLMW-1	BLMW-1-062014	6/11/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-1	BLMW-1-062014	6/11/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-10	BLMW-10-062014	6/13/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-10	BLMW-10-062014	6/13/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-11	BLMW-11-062014	6/11/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-11	BLMW-11-062014	6/11/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-062014	6/12/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-062014	6/12/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-9	BLMW-9-062014	6/13/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-9	BLMW-9-062014	6/13/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-10	UCCMW-10-062014	6/13/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-10	UCCMW-10-062014	6/13/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Groundwater (cont.)						
December 2014 Area-Wide Quarterly Groundwater Monitoring / Quarterly Post-ChemOx Groundwater Monitoring	BB-2	BB-2-122014	12/12/2014	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	BB-2	BB-2-122014	12/12/2014	EPA 8260C	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	BB-3	BB-3-122014	12/17/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-1	BLMW-1-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-1	BLMW-1-122014	12/8/2014	EPA 8260C	88	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-10	BLMW-10-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-10	BLMW-10-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-11	BLMW-11-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-11	BLMW-11-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-5R	BLMW-5R-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-5R	BLMW-5R-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-6R	BLMW-6R-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-6R	BLMW-6R-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-7	BLMW-7-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-7	BLMW-7-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-9	BLMW-9-122014	12/8/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-9	BLMW-9-122014	12/8/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-10	UCCMW-10-122014	12/11/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-16	UCCMW-16-122014	12/17/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-17	UCCMW-17-122014	12/17/2014	EPA 8260C	42	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-18	UCCMW-18-122014	12/17/2014	EPA 8260C	42	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-18	UCCMW-18-122014	12/17/2014	EPA 8260C	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-122014	12/11/2014	EPA 8260C	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-122014	12/11/2014	EPA 8260C	42	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-21	UCCMW-21-122014	12/11/2014	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-23	UCCMW-23-122014	12/17/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-24	UCCMW-24-122014	12/11/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-25	UCCMW-25-122014	12/11/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-4D	UCCMW-4D-122014	12/17/2014	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-5	UCCMW-5-122014	12/17/2014	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-6	UCCMW-6-122014	12/17/2014	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-7	UCCMW-7-122014	12/17/2014	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-8	UCCMW-8-122014	12/12/2014	EPA 8260C	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-122014	12/12/2014	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-9	UCCMW-9-122014	12/17/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-9	UCCMW-9-122014	12/17/2014	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
January 2015 Quarterly Groundwater Monitoring: Baseline	UCCMW-11	UCCMW-11D-012015	1/9/2015	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-11S	UCCMW-11S-012015	1/9/2015	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-12D	UCCMW-12D-012015	1/9/2015	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-12S	UCCMW-12S-012015	1/9/2015	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-13D	UCCMW-13D-012015	1/9/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-13S	UCCMW-13S-012015	1/9/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-14D	UCCMW-14D-012015	1/9/2015	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-14S	UCCMW-14S-012015	1/9/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
January 2015 Quarterly Post-Bioremediation Groundwater Monitoring	UCCMW-10	UCCMW-10-012015	1/29/2015	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-5	UCCMW-5-072015	7/17/2015	EPA 8260C	1	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-9	UCCMW-9-072015	7/9/2015	EPA 8260C	1	Changed final qualifier to U because UseResult=ReportingLimit

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Groundwater (cont.)						
October 2015 Quarterly Post-Bioremediation Groundwater Monitoring	BI-3	BI-3-102015	10/22/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	INJ-9	INJ-9-102015	10/21/2015	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-1	UCCMW-1-102015	10/21/2015	EPA 8260C	42	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-1	UCCMW-1-102015	10/21/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-1	UCCMW-1-102015	10/21/2015	EPA 8260C	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-10	UCCMW-10-102015	10/26/2015	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-10	UCCMW-10-102015	10/26/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-16	UCCMW-16-102015	10/20/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-17	UCCMW-17-102015	10/20/2015	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-18	UCCMW-18-102015	10/20/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-18	UCCMW-18-102015	10/20/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-19	UCCMW-19-102015	10/21/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-19	UCCMW-19-102015	10/21/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-20	UCCMW-20-102015	10/26/2015	RSK 175	1	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-20	UCCMW-20-102015	10/26/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-21	UCCMW-21-102015	10/26/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-21	UCCMW-21-102015	10/26/2015	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-25	UCCMW-25-102015	10/26/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-25	UCCMW-25-102015	10/26/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-26	UCCMW-26-102015	10/21/2015	EPA 8260C	42	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-26	UCCMW-26-102015	10/21/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-27	UCCMW-27-102015	10/22/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-4D	UCCMW-4D-102015	10/21/2015	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-5	UCCMW-5-102015	10/21/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-7	UCCMW-7-102015	10/21/2015	EPA 8260C	44	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-7	UCCMW-7-102015	10/21/2015	RSK 175	3	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-8	UCCMW-8-102015	10/21/2015	RSK 175	2	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-8	UCCMW-8-102015	10/21/2015	EPA 8260C	43	Changed final qualifier to U because UseResult=ReportingLimit
May 2016 Quarterly Post-Bioremediation Groundwater Monitoring	INJ-2	INJ-2-052016	5/3/2016	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-052016	5/4/2016	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-052016	5/4/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-052016	5/4/2016	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-16	UCCMW-16-052016	5/3/2016	EPA 8260C	46	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-17	UCCMW-17-052016	5/3/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-052016	5/3/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-052016	5/3/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-052016	5/3/2016	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-052016	5/4/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-052016	5/4/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-052016	5/4/2016	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-5	UCCMW-5-052016	5/4/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-5	UCCMW-5-052016	5/4/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Groundwater (cont.)						
August 2016 Quarterly Post-Bioremediation Groundwater Monitoring	BB-3	BB-3-082016	8/10/2016	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	INJ-2	INJ-2-082016	8/12/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-16	UCCMW-16-082016	8/11/2016	RSK 175	3	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-16	UCCMW-16-082016	8/11/2016	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCMW-21	UCCMW-21-082016	8/11/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-21	UCCMW-21-082016	8/11/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-23	UCCMW-23-082016	8/12/2016	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-082016	8/10/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-082016	8/10/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-082016	8/10/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-27	UCCMW-27-082016	8/10/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-4D	UCCMW-4D-082016	8/12/2016	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-5	UCCMW-5-082016	8/10/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-6	UCCMW-6-082016	8/12/2016	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-082016	8/10/2016	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-082016	8/10/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-082016	8/10/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-082016	8/10/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-9	UCCMW-9-082016	8/12/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
November 2016 Quarterly Post-Bioremediation Groundwater Monitoring	INJ-2	INJ-2-112016	11/14/2016	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-112016	11/11/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-112016	11/11/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-112016	11/11/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-16	UCCMW-16-112016	11/14/2016	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-17	UCCMW-17-112016	11/10/2016	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-112016	11/10/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-112016	11/10/2016	EPA 8260C	41	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-112016	11/10/2016	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-112016	11/10/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-112016	11/10/2016	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-112016	11/10/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-112016	11/10/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-112016	11/29/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-112016	11/29/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-21	UCCMW-21-112016	11/29/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-21	UCCMW-21-112016	11/29/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-112016	11/29/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-112016	11/29/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-112016	11/29/2016	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-112016	11/29/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-112016	11/11/2016	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-112016	11/11/2016	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-112016	11/11/2016	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-27	UCCMW-27-112016	11/11/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-27	UCCMW-27-112016	11/11/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-27	UCCMW-27-112016	11/11/2016	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-5	UCCMW-5-112016	11/14/2016	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-5	UCCMW-5-112016	11/14/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-112016	11/14/2016	EPA 8260C	41	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-112016	11/14/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-112016	11/11/2016	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-112016	11/11/2016	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-8	UCCMW-8-112016	11/11/2016	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Groundwater (cont.)						
March 2017 HWA Delineation of Ultra and Riverside HVOC Sites	UCCB-6	UCCB6-22-GW	3/23/2017	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-6	UCCB6-9-GW	3/23/2017	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-6	UCCB6-36-GW	3/23/2017	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-7	UCCB7-28-GW	3/23/2017	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-7	UCCB7-17-GW	3/23/2017	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-7	UCCB7-38-GW	3/23/2017	EPA 8260C	45	Changed final qualifier to U because UseResult=ReportingLimit
March 2017 Quarterly Post-Bioremediation Groundwater Monitoring	BB-3	BB-3-032017	3/7/2017	EPA 8260C	44	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	BI-3	BI-3-032017	3/8/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	INJ-2	INJ-2-032017	3/13/2017	EPA 8260C	41	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-032017	3/13/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-032017	3/13/2017	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-1	UCCMW-1-032017	3/13/2017	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-16	UCCMW-16-032017	3/13/2017	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-16	UCCMW-16-032017	3/13/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-17	UCCMW-17-032017	3/13/2017	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-17	UCCMW-17-032017	3/13/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-032017	3/13/2017	RSK 175	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-032017	3/13/2017	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-18	UCCMW-18-032017	3/13/2017	EPA 8260C	41	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-032017	3/9/2017	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-032017	3/9/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-19	UCCMW-19-032017	3/9/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-032017	3/8/2017	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-20	UCCMW-20-032017	3/8/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-21	UCCMW-21-032017	3/8/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-21	UCCMW-21-032017	3/8/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-23	UCCMW-23-032017	3/9/2017	EPA 8260C	45	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-24	UCCMW-24-032017	3/7/2017	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-032017	3/7/2017	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-032017	3/7/2017	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-032017	3/7/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-25	UCCMW-25-032017	3/7/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-032017	3/13/2017	EPA 353.2	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-032017	3/13/2017	ASTM D516-07	1	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-032017	3/13/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-26	UCCMW-26-032017	3/13/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-27	UCCMW-27-032017	3/13/2017	EPA 8260C	43	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-032017	3/7/2017	RSK 175	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-7	UCCMW-7-032017	3/7/2017	EPA 8260C	42	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Soil						
September 2009 Parametrix Remedial Investigation Sampling: Bothell Landing	BLMW-6	BLMW-6-2.5	9/4/2009	EPA 8270	1	Changed final qualifier to U because UseResult=ReportingLimit
September 2011 HWA Subsurface Investigation: Ultra Cleaners	HWA-CH-B1	HWA-CH-B1-3	9/30/2011	EPA 8260	10	Non-detect (ND) inferred following quality control (QC) of other lab reports
	HWA-CH-B1	HWA-CH-B1-7	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B1	HWA-CH-B1-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B1	HWA-CH-B1-7	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-4	9/30/2011	EPA 8260	9	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-4	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-2	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-2	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-3	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	1	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B3	HWA-CH-B3-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-3	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B4	HWA-CH-B4-8	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-8	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B4	HWA-CH-B4-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
December 2011 HWA Subsurface Investigation - Bothell Way Drainage Improvements	PSD-B5	PSD-B5-3	12/15/2011	EPA 8260	1	Changed final qualifier to U because UseResult=ReportingLimit
January 2014 Subsurface Investigation: Bothell Landing	BLMW-11	BLMW-11-14	1/13/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-11	BLMW-11-14	1/13/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-9	1/6/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-11c	1/6/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-11c	1/6/2014	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	BLMW-12	BLMW-12-9	1/6/2014	EPA 8021B	5	Changed final qualifier to U because UseResult=ReportingLimit
January 2014 Subsurface Investigation: Ultra Cleaners	UCCMW-4D	UCC MW-4D-32.5	1/9/2014	EPA 8021B	3	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-32.5	1/9/2014	EPA 8021B	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-4D	UCC MW-4D-40	1/9/2014	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-4D	UCC MW-4D-40	1/9/2014	EPA 8260C	11	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-32.5	1/9/2014	EPA 8260C	34	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-4D	UCC MW-4D-32.5	1/9/2014	EPA 8260C	10	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-40	1/9/2014	EPA 8021B	3	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-40	1/9/2014	NWTPH-Gx	1	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-32.5	1/9/2014	NWTPH-Gx	1	ND inferred following QC of other lab reports
	UCCMW-4D	UCC MW-4D-40	1/9/2014	EPA 8021B	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-6	UCC MW-6-15	1/8/2014	EPA 8021B	3	ND inferred following QC of other lab reports
	UCCMW-6	UCC MW-6-15	1/8/2014	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-6	UCC MW-6-15	1/8/2014	EPA 8021B	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-6	UCC MW-6-15	1/8/2014	EPA 8260C	10	ND inferred following QC of other lab reports
	UCCMW-6	UCC MW-6-15	1/8/2014	NWTPH-Gx	1	ND inferred following QC of other lab reports
	UCCMW-9	UCC MW-9-16	1/8/2014	EPA 8021B	3	ND inferred following QC of other lab reports
	UCCMW-9	UCC MW-9-16	1/8/2014	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-9	UCC MW-9-16	1/8/2014	NWTPH-Gx	1	ND inferred following QC of other lab reports
	UCCMW-9	UCC MW-9-16	1/8/2014	EPA 8021B	2	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCMW-9	UCC MW-9-16	1/8/2014	EPA 8260C	10	ND inferred following QC of other lab reports

Table B.3
Summary of Qualifier Revisions for Historical Data

Event	Location Name	Sample ID	Sample Date	Analysis Method	Number of Results Changed	Notes
Soil (cont.)						
March 2017 HWA Delineation of Ultra and Riverside HVOC Sites	UCCB-10	UCCB10-11.0	3/20/2017	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCB-3	UCCB3-32.5	3/24/2017	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	UCCB-6	UCCB6-25.5	3/23/2017	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-7	UCCB7-20.0	3/23/2017	EPA 8260C	46	Changed final qualifier to U because UseResult=ReportingLimit
	UCCB-9	UCCB9-35.5	3/22/2017	EPA 8260C	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
September 2011 HWA Subsurface Investigation: Ultra Cleaners	HWA-CH-B1	HWA-CH-B1-3	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B1	HWA-CH-B1-7	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B1	HWA-CH-B1-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B1	HWA-CH-B1-7	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-4	9/30/2011	EPA 8260	9	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-4	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-2	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B2	HWA-CH-B2-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-2	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B2	HWA-CH-B2-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-3	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	1	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	10	ND inferred following QC of other lab reports
	HWA-CH-B3	HWA-CH-B3-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B3	HWA-CH-B3-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B3	HWA-CH-B3-8	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-3	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B4	HWA-CH-B4-8	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-8	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports
	HWA-CH-B4	HWA-CH-B4-3	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-6	9/30/2011	EPA 8260	35	Apparent error in EIM corrected following verification with original laboratory EDDs from representative events
	HWA-CH-B4	HWA-CH-B4-6	9/30/2011	EPA 8260	11	ND inferred following QC of other lab reports

Ultra Custom Care
Cleaners Site

Remedial Investigation and Feasibility Study

Appendix C
Chemical Parameters and Backup Calculations

FINAL

Table C.1
Chemical and Toxicological Parameters [1]

		Toxicity Factors						Chemical Parameters
Chemical	**CAS No.**	**RfC** Inhalation Reference Concentration (mg/m^3)	**RfDi** Inhalation Reference Dose (mg/kg-day)	**IUR** Inhalation Unit Risk ($(\mu g/m^3)^{-1}$)	**CPFi** Inhalation Cancer Potency Factor (kg-day/mg)	**RfDo** Oral Reference Dose (mg/kg-day)	**CPFo** Oral Cancer Potency Factor (kg-day/mg)	**Hcc** (Henry's Law Constant) at 13 degrees C (unitless)
Total Metals								
Arsenic	7440-38-2	1.50E-05	4.29E-06	4.30E-03	1.51E+01	3.00E-04	1.50E+00	0.00E+00
Chlorinated Volatile Organic Compounds								
Tetrachloroethene	127-18-4	4.00E-02	1.14E-02	2.60E-07	9.10E-04	6.00E-03	2.10E-03	4.00E-01
Trichloroethene	79-01-6	2.00E-03	5.71E-04	4.10E-06	1.44E-02	5.00E-04	4.60E-02	2.44E-01
cis-1,2-Dichloroethene	156-59-2					2.00E-03		1.00E-01
trans-1,2-Dichloroethene	156-60-5	4.00E-02	1.14E-02			2.00E-02		2.39E-01
Vinyl chloride	75-01-4	1.00E-01	2.86E-02	8.80E-06	3.08E-02	3.00E-03	1.50E+00	8.30E-01
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	630-20-6			7.40E-06	2.59E-02	3.00E-02	2.60E-02	4.75E-02
1,1,1-Trichloroethane	71-55-6	5.00E+00	1.43E+00			2.00E+00		4.21E-01
1,1,2,2-Tetrachloroethane	79-34-5			5.80E-05	2.03E-01	2.00E-02	2.00E-01	6.90E-03
1,1,2-Trichloroethane	79-00-5	2.00E-04	5.71E-05	1.60E-05	5.60E-02	4.00E-03	5.70E-02	1.98E-02
1,1-Dichloroethane	75-34-3			1.60E-06	5.60E-03	2.00E-01	5.70E-03	1.42E-01
1,1-Dichloroethene	75-35-4	2.00E-01	5.71E-02			5.00E-02		7.05E-01
1,2,3-Trichloropropane	96-18-4	3.00E-04	8.57E-05			4.00E-03	3.00E+01	6.68E-03
1,2,4-Trichlorobenzene	120-82-1	2.00E-03	5.71E-04			1.00E-02	2.90E-02	2.38E-02
1,2,4-Trimethylbenzene	95-63-6	6.00E-02	1.71E-02			1.00E-02		1.15E-01
1,2-Dibromo-3-chloropropane	96-12-8	2.00E-04	5.71E-05	6.00E-03	2.10E+01	2.00E-04	8.00E-01	2.60E-03
1,2-Dibromoethane	106-93-4	9.00E-03	2.57E-03	6.00E-04	2.10E+00	9.00E-03	2.00E+00	1.41E-02
1,2-Dichlorobenzene	95-50-1	2.00E-01	5.71E-02			9.00E-02		3.62E-02
1,2-Dichloroethane	107-06-2	7.00E-03	2.00E-03	2.60E-05	9.10E-02	6.00E-03	9.10E-02	2.29E-02
1,2-Dichloropropane	78-87-5	4.00E-03	1.14E-03	3.70E-06	1.30E-02	4.00E-02	3.70E-02	6.52E-02
1,1-Dichloropropene	563-58-6							
1,2,3-Trichlorobenzene	87-61-6					8.00E-04		1.72E-02
1,3,5-Trimethylbenzene	108-67-8	6.00E-02	1.71E-02			1.00E-02		1.64E-01
1,3-Dichlorobenzene	541-73-1							5.09E-02
1,3-Dichloropropane	142-28-9					2.00E-02		2.09E-02
1,4-Dichlorobenzene	106-46-7	8.00E-01	2.29E-01	1.10E-05	3.85E-02	7.00E-02	5.40E-03	4.63E-02
2-Chlorotoluene	95-49-8					2.00E-02		7.08E-02
2-Hexanone	591-78-6	3.00E-02	8.57E-03			5.00E-03		1.89E-03
4-Chlorotoluene	106-43-4							
Acetone	67-64-1	3.10E+01	8.86E+00			9.00E-01		9.72E-04
Bromobenzene	108-86-1	6.00E-02	1.71E-02			8.00E-03		4.32E-02
Bromochloromethane	74-97-5	4.00E-02	1.14E-02					3.59E-02
Bromodichloromethane	75-27-4			3.70E-05	1.30E-01	2.00E-02	6.20E-02	3.71E-02
Bromoform	75-25-2			1.10E-06	3.85E-03	2.00E-02	7.90E-03	1.05E-02
Bromomethane	74-83-9	5.00E-03	1.43E-03			1.40E-03		1.79E-01
Carbon disulfide	75-15-0	7.00E-01	2.00E-01			1.00E-01		8.06E-01
Carbon tetrachloride	56-23-5	1.00E-01	2.86E-02	6.00E-06	2.10E-02	4.00E-03	7.00E-02	7.48E-01
Chlorobenzene	108-90-7	5.00E-02	1.43E-02			2.00E-02		7.93E-02
Chloroethane	75-00-3	1.00E+01	2.86E+00					3.12E-01
Chloroform	67-66-3	9.80E-02	2.80E-02	2.30E-05	8.05E-02	1.00E-02	3.10E-02	9.17E-02
Chloromethane	74-87-3	9.00E-02	2.57E-02					2.69E-01
Dibromochloromethane	124-48-1					2.00E-02	8.40E-02	2.11E-02
Dibromomethane	74-95-3	4.00E-03	1.14E-03			1.00E-02		1.89E-02
Dichlorodifluoromethane	75-71-8	1.00E-01	2.86E-02			2.00E-01		1.08E+01
Hexachlorobenzene	118-74-1			4.60E-04	1.61E+00	8.00E-04	1.60E+00	1.73E-02
Hexachlorobutadiene	87-68-3			2.20E-05	7.70E-02	1.00E-03	7.80E-02	1.41E-01
Hexachloroethane	67-72-1	3.00E-02	8.57E-03	1.10E-05	3.85E-02	7.00E-04	4.00E-02	5.98E-02
iso-Propylbenzene	98-82-8	4.00E-01	1.14E-01			1.00E-01		2.01E-01
Methyl ethyl ketone	78-93-3	5.00E+00	1.43E+00			6.00E-01		1.34E-03
Methyl iso butyl ketone	108-10-1	3.00E+00	8.57E-01			8.00E-02		2.94E-03
Methylene chloride	75-09-2	6.00E-01	1.71E-01	1.00E-08	3.50E-05	6.00E-03	2.00E-03	5.70E-02
Methyl-Tert-Butyl Ether	1634-04-4	3.00E+00	8.57E-01	2.60E-07	9.10E-04		1.80E-03	1.12E-02
n-Butylbenzene	104-51-8					5.00E-02		2.93E-01
n-Propylbenzene	103-65-1	1.00E+00	2.86E-01			1.00E-01		2.02E-01
Nitrobenzene	98-95-3	9.00E-03	2.57E-03	4.00E-05	1.40E-01	2.00E-03		3.98E-04
sec-Butylbenzene	135-98-8					1.00E-01		2.75E-01
Styrene	100-42-5	1.00E+00	2.86E-01			2.00E-01		5.63E-02
tert-Butylbenzene	98-06-6					1.00E-01		2.06E-01
Trichlorofluoromethane	75-69-4	7.00E-01	2.00E-01			3.00E-01		2.68E+00
Vinyl acetate	108-05-4	2.00E-01	5.71E-02			1.00E+00		1.18E-02
Total Petroleum Hydrocarbons								
Diesel Range Organics	DRO							
Gasoline Range Organics	GRO							
Oil Range Organics	ORO							
Benzene, Toluene, Ethylbenzene, and Xylenes								
Benzene	71-43-2	3.00E-02	8.57E-03	7.80E-06	2.73E-02	4.00E-03	5.50E-02	1.34E-01
Ethylbenzene	100-41-4	1.00E+00	2.86E-01			1.00E-01		1.64E-01
Toluene	108-88-3	5.00E+00	1.43E+00			8.00E-02		1.49E-01
Xylene (total)	1330-20-7	1.00E-01	2.86E-02			2.00E-01		1.41E-01

Notes:

Blanks are intentional; no value exists.

1 Chemical partitioning and toxicity factors provided in this table are used in calculating screening levels and cleanup levels. These values are sourced from Ecology's February 2021 CLARC data tables.

Table C.2
MTCA Vapor Intrusion Cleanup Level Calculations

Inputs to Eq. 750-1 and 750-2 for Commercial Properties			
		Units	Input Value
inhalation absorption fraction	ABSi	unitless	1
average body weight	ABW	kg	70
averaging time	AT	yr	75
attenuation factor	AF	unitless	0.03
breathing rate	BR	m3/day	20
Indoor Air Cleanup Level	CULi	µg/m^3	(calc)
exposure duration	ED	yr	30
exposure frequency (residential)	EF	unitless	1
exposure frequency (commercial)	EF	unitless	0.33
component fraction by weight	Fi	unitless	(calc)
hazard index	HI	unitless	1
target hazard quotient	HQ	unitless	1
inhalation reference dose	RfDi	mg/kg-day	See Table
inhalation cancer potency factor	CPF$_i$	kg-day/mg	See Table
Risk	RISK	unitless	0.000001
unit conversion factor	UCF	µg/mg	1000

Equations

$$CUL_i = \frac{RfDi \times ABW \times UCF \times HQ \times AT}{BR \times ABS_i \times ED \times EF}$$

Eq. 750-1 used for non-carcinogenic exposure endpoint

$$CUL_i = \frac{RISK \times ABW \times AT \times UCF}{CPF \times BR \times ABS_i \times ED \times EF}$$

Eq. 750-2 used for carcinogenic exposure endpoint

$$CUL_{GW}\ (\mu g/L) = \frac{CULi}{VAF \times UCF \times H_{cc}}$$

Eqn 1. Generic groundwater VI SLs from Ecology's Vapor Intrusion Guidance

Inputs to Eqn 1. Generic Groundwater VI SLs			
		Units	Input Value
Vapor Intrusion Target Cleanup Level	CUL_{GW}	µg/L	Calculated
Vapor Attenuation Factor	VAF	unitless	0.001
unit conversion factor	UCF	L/m^3	1000
Henry's Law Constant at 13 C	Hcc	unitless	See Table

Chemical	CAS No.	RfDi (mg/kg-day)	CPFi (kg-day/mg)	Constant (H_{cc}) at 13 degrees C (unitless)	Non-Carcinogenic	Carcinogenic	Modified Indoor Air CUL	Basis	Modified Groundwater Vapor Intrusion CUL (µg/L)
				Commerical Modified Method B CULs for Indoor Air					
cVOCs									
Tetrachloroethene	127-18-4	1.14E-02	9.10E-04	4.00E-01	303.03	29.14	**29**	Cancer	73
Trichloroethene	79-01-6	5.71E-04	1.44E-02	2.44E-01	15.15	1.85	**1.8**	Cancer	7.6
trans-1,2-Dichloroethene	156-60-5	1.14E-02		2.39E-01	303.03		**303**	Noncancer	1300
Vinyl chloride	75-01-4	2.86E-02	3.08E-02	8.30E-01	757.58	0.86	**0.9**	Cancer	1
BTEX									
Benzene	71-43-2	8.57E-03	2.73E-02	1.34E-01	227.27	0.97	**1.0**	Cancer	7.3
Ethylbenzene	100-41-4	2.86E-01		1.64E-01	7575.76		**7576**	Noncancer	46000
Toluene	108-88-3	1.43E+00		1.49E-01	37878.79		**37879**	Noncancer	260000
Xylene (total)	1330-20-7	2.86E-02		1.41E-01	757.58		**758**	Noncancer	5400
VOCs									
1,1,1,2-Tetrachloroethane	630-20-6		2.59E-02	4.75E-02		1.02	**1.0**	Cancer	22
1,1,1-Trichloroethane	71-55-6	1.43E+00		4.21E-01	37878.79		**37879**	Noncancer	90000
1,1,2,2-Tetrachloroethane	79-34-5		2.03E-01	6.90E-03		0.13	**0.13**	Cancer	19
1,1,2-Trichloroethane	79-00-5	5.71E-05	5.60E-02	1.98E-02	1.52	0.47	**0.47**	Cancer	24
1,1-Dichloroethane	75-34-3		5.60E-03	1.42E-01		4.73	**4.7**	Cancer	33
1,1-Dichloroethene	75-35-4	5.71E-02		7.05E-01	1515.15		**1515**	Noncancer	2100
1,2,3-Trichlorobenzene	87-61-6			1.72E-02					NE
1,2,4-Trichlorobenzene	120-82-1	5.71E-04		2.38E-02	15.15		**15**	Noncancer	640
1,2,4-Trimethylbenzene	95-63-6	1.71E-02		1.15E-01	454.55		**455**	Noncancer	4000
1,2-Dibromoethane	106-93-4	2.57E-03	#######	1.41E-02	68.18	0.01	**0.01**	Cancer	0.89
1,2-Dichlorobenzene	95-50-1	5.71E-02		3.62E-02	1515.15		**1515**	Noncancer	42000
1,2-Dichloroethane	107-06-2	2.00E-03	9.10E-02	2.29E-02	53.03	0.29	**0.29**	Cancer	13
1,2-Dichloropropane	78-87-5	1.14E-03	1.30E-02	6.52E-02	30.30	2.05	**2.0**	Cancer	31
1,4-Dichlorobenzene	106-46-7	2.29E-01	3.85E-02	4.63E-02	6060.61	0.69	**0.69**	Cancer	15
Acetone	67-64-1	8.86E+00		9.72E-04	234848.48		**234848**	Cancer	240000000
Bromodichloromethane	75-27-4		1.30E-01	3.71E-02		0.20	**0.20**	Cancer	5.5
Bromoform	75-25-2		3.85E-03	1.05E-02		6.89	**6.9**	Cancer	660
Bromomethane	74-83-9	1.43E-03		1.79E-01	37.88		**38**	Noncancer	210
Carbon disulfide	75-15-0	2.00E-01		8.06E-01	5303.03		**5303**	Noncancer	6600
Carbon tetrachloride	56-23-5	2.86E-02	2.10E-02	7.48E-01	757.58	1.26	**1.3**	Cancer	1.7
Chlorobenzene	108-90-7	1.43E-02		7.93E-02	378.79		**379**	Noncancer	4800
Chloroethane	75-00-3	2.86E+00		3.12E-01	75757.58		**75758**	Noncancer	240000
Chloroform	67-66-3	2.80E-02	8.05E-02	9.17E-02	742.42	0.33	**0.33**	Cancer	3.6
Chloromethane	74-87-3	2.57E-02		2.69E-01	681.82		**682**	Noncancer	2500
Dichlorodifluoromethane	75-71-8	2.86E-02		1.08E+01	757.58		**758**	Noncancer	70
Hexachlorobutadiene (7)	87-68-3		7.70E-02	1.41E-01		0.34	**0.34**	Cancer	2.4
Hexachloroethane	67-72-1	8.57E-03	3.85E-02	5.98E-02	227.27	0.69	**0.69**	Cancer	12
iso-Propylbenzene	98-82-8	1.14E-01		2.01E-01	3030.30		**3030**	Noncancer	15000
Methyl ethyl ketone	78-93-3	1.43E+00		1.34E-03	37878.79		**37879**	Noncancer	28000000
Methyl iso butyl ketone	108-10-1	8.57E-01		2.94E-03	22727.27		**22727**	Noncancer	7700000
Methylene chloride	75-09-2	1.71E-01	3.50E-05	5.70E-02	4545.45	757.58	**758**	Cancer	13000
Methyl-Tert-Butyl Ether	1634-04-4	8.57E-01	9.10E-04	1.12E-02	22727.27	29.14	**29**	Cancer	2600
Nitrobenzene	98-95-3	2.57E-03	1.40E-01	3.98E-04		0.19	**0.19**	Noncancer	480
Styrene	100-42-5	2.86E-01		5.63E-02	7575.76		**7576**	Noncancer	130000
Trichlorofluoromethane	75-69-4	2.00E-01		2.68E+00	5303.03		**5303**	Noncancer	2000
Vinyl acetate	108-05-4	5.71E-02		1.18E-02	1515.15		**1515**	Noncancer	130000

Notes:

Input value has been modified from residential screening level exposure inputs to value appropriate for commercial properties.

Use of standard default exposure factors and Equation 750-2 are equations and input parameters defined in MTCA under WAC 173-340-750: https://apps.leg.wa.gov/wac/default.aspx?cite=173-340-750

An Exposure Frequency of 0.33 is used to represent a commercial business exposure scenario at 8 hours a day for 7 days a week over a course of a year.

RfDi and CPFi values from CLARC database.

Default Method Method B CULs from CLARC and are based on residential exposure levels.

Sub Slab Screening Level is based on a Vapor Attenuation Factor of 0.03

Abbreviations:

MTCA = Model Toxics Control Act Cleanup Regulation Chapter

WAC = Washington Administrative Code

NA = Not Applicable

Ultra Custom Care
Cleaners Site

Remedial Investigation and Feasibility Study

Appendix D
Detailed Cost Estimates

FINAL

Table D.1
Summary of Cleanup Action Alternative Costs

Alternative	Restoration Time Frame (years) (1)	Construction Capital Cost	Other Professional Services	Long-Term Monitoring	Cost (2)
Alternative 1	4–5	$1,119,000	$350,000	$251,000	$2,100,000
Alternative 2	6–8	$717,000	$275,000	$337,000	$1,600,000
Alternative 3	8–10	$1,457,000	$427,000	$408,000	$2,800,000
Alternative 4	30	$175,000	$111,000	$1,150,000	$1,500,000

Notes:

Total costs are rounded to the nearest $100,000.

1 Include remedy implementation in time frame.

2 Includes total of construction costs, professional services (including long-term monitoring), sales tax, and a 25% contingency.

Table D.2
Detailed Costs for Cleanup Action Alternative 1

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION CAPITAL COSTS					
Source Excavation					
Mob/Demob	1	LS	$ 10,000.00	$ 10,000.00	Based on similar sites.
Traffic Control	4	Day	$ 1,000.00	$ 4,000.00	Assumes closure of travel lanes during one excavation and utility decommission/reconnect.
Removing asphalt/concrete and disposal	2405	SF	$ 1.00	$ 2,405.00	Assumes a concrete and asphalt surface that will be removed from four separate small areas consisting of 560, 155, 940 and 750 SF.
Utilities: relocation/cap/reconnect	1	LS	$ 15,000.00	$ 15,000.00	Assumes there are utilities.
Shoring	3	weeks	$ 1,700.00	$ 5,100.00	Assumes 8' x 10' trench box, weekly rental plus delivery/installation.
Removal of impacted soil	814	CY	$ 20.00	$ 16,280	Cost to excavate and load impacted soil based on similar projects. Assumes vertical sidewalls with shoring in deeper saturated source area. Excavations are 560 SF x 5.5 ft bgs, 155 SF x 5 ft bgs, 940 SF x 9 ft bgs and 750 SF x 8 ft bgs plus 20% fluff factor.
Loading impacted soil as contained-in waste	40	hours	$ 150.00	$ 6,000	Assumes a total of 40 hours of loading time: $70/hour for operator and $80/hour for excavator.
Transportation of contained-in waste Subtitle D soil	156	hours	$ 180.00	$ 28,132	Assume that intermodals are transported to the Site for direct load. 3-hour round trip at $180 per hour, which assumes prevailing wage prices. $145 per hour without prevailing wage.
Disposal of contained-in-waste Subtitle D	1302	ton	$ 60.40	$ 78,665	Assume a CY:tons ratio of 1.6; $1450.0 per intermodal container with 25 tons in each container and a 3.6% Washington State Refuse tax. Also includes $60 for each liner; assuming that the contained-in-waste letter will require liners.
Import and compact clean backfill	1308	tons	$ 20.00	$ 26,160	Assumes 1:1 replacement of excavated soil.
Site restoration	1	LS	$ 5,000.00	$ 5,000	Assumes that site will be restored or finished according to development plans; e.g., asphalt or concrete.
Plume Wide PlumeStop Injections					
Hydrant permit	1	LS	$ 20,000.00	$ 20,000	Assumes that hydrant costs are not included in Regenesis quote.
Permit for injection of PlumeStop: UIC Permit	197	borings	$ 100.00	$ 19,700	15A NCAC 02C.0200 Well Construction Standards: Criteria and Standards Applicable to Injection Wells; State charges $100 per boring; Included above in surfactant wells.
Design Verification Testing	1	LS	$ 28,000.00	$ 28,000	Pilot test activities to confirm soil parameters and collect soil with a geoprobe, passive flux meters, placed in 2 wells (~$10,000), clear water injection testing, prefield activities to fine tune design. 2-3 days of work.
PlumeStop Injections	82240	lbs	$ 5.48	$ 450,675	Quote from Regenesis.
Regenesis Total Services includes coordinating and conducting injection activities	1	LS	$ 383,000.00	$ 383,000	Cost from Regenesis estimate that includes drilling costs and assumes that a large geoprobe can be used and installation of injection wells are not required; supplemental injections are not required.
Traffic Control	17	Day	$ 1,000.00	$ 17,000	Assumes travel lanes will be closed during injections in ROW.
Soil/water drum disposal	1	LS	$ 3,000.00	$ 3,000	Assumes that no soil will be generated and very little water.
			SUBTOTAL CONSTRUCTION CAPITAL COSTS	**$ 1,119,000**	

Table D.2
Detailed Costs for Cleanup Action Alternative 1

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION INDIRECT COSTS					
Project Management	5	%	DC	$ 55,950	PM Costs for injection activities.
Engineering Design Report and Remedial Action Work Plan, Contract Documents for Excavation	1	LS	$ 130,000.00	$ 130,000	Includes draft and final based on Ecology comments. Assumes that an EDR and work plan are required.
Contained-In Waste Application and Determination	1	LS	$ 5,000.00	$ 5,000	Assumes that a contained-in-waste determination is needed. Time includes memo/letter preparations, ecology coordination.
Contractor Coordination and Preparation	1	LS	$ 15,000.00	$ 15,000	Assumes that Floyd|Snider will perform coordination with Regenesis and Regenisis will be the main coordinator for the drillers. Includes 3, 12-hour days of verification testing oversight.
Field management and oversight	960	Hours	$ 150.00	$ 144,000	Assumes 12 hour days and pre and post-field prep with 3 hours per day of administrative and reporting tasks; a total of 16 days for excavation and 48 days for injection activities.
Completion report	1	LS	$ 40,000.00	$ 40,000	Completion report for Ecology records.
SUBTOTAL CONSTRUCTION INDIRECT COSTS				**$ 350,000**	
LONG-TERM MONITORING AND CLOSURE					
Project Management	8	Event	$ 1,400.00	$ 11,200	Includes correspondence with adjacent property owners/consultants and sampling coordination of up to 3 years of sampling events. Assumes up to 8 hours of coordination per event.
Groundwater monitoring	8	Event	$ 15,000.00	$ 120,000	Assumes semiannual monitoring in the first two years and then 4 consecutive quarterly events to show compliance. COCs and select MNA parameters; includes inflation.
Annual Reporting	2	Event	$ 9,500.00	$ 19,000	Assumes 50 hours of staff time and 10 hours of PM time per annual report; final annual report data will be incorporated into Site closure completion report.
Water drum disposal	2	Event	$ 1,700.00	$ 3,400	Disposal of purged water drums.
Well abandonment activities after remedy completion	63	wells	$ 900.00	$ 56,700	Assumes that most well boxes do not need to be removed, only chipped-in-place and filled with concrete; wells in sidewalks need to be removed and the sidewalk section needs to be replaced. Includes injection wells. Assumes two mobilizations: prior to excavation and at site closure.
Closure report and Ecology correspondence	1	LS	$ 40,000.00	$ 40,000	Draft and final completion report including Ecology review.
SUBTOTAL LONG -TERM MONITORING AND CLOSURE				**$ 251,000**	
25% Contingency added to remedial construction activities	25	%	DC	$ 279,750	25% contingency added to excavation and injection activities.
Taxes	9	%	DC	$ 100,710	Applicable to excavation and injection activities.
Total				**$ 2,100,000**	

Abbreviations:

bgs	Below ground surface
CAP	Cleanup Action Plan
COC	Chemical of concern
CY	Cubic yards
DC	Direct cost
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
ft	Feet
lbs	Pounds
LS	Lump sum
MNA	Monitored natural attenuation
ROW	Right-of-way
SF	Square feet
UIC	Underground Injection Control

Table D.3
Detailed Costs for Cleanup Action Alternative 2

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION CAPITAL COSTS					
Source Excavation					
Mob/Demob	1	LS	$ 10,000.00	$ 10,000.00	Based on similar sites.
Removing asphalt/concrete and disposal	1655	SF	$ 1.00	$ 1,655.00	Assumes a concrete and asphalt surface that will be removed from three separate small areas consisting of 940, 560, and 155 SF.
Utilities: relocation/cap/reconnect	1	LS	$ 10,000.00	$ 10,000.00	Assumes there are utilities.
Shoring	2	weeks	$ 1,700.00	$ 3,400.00	Assumes 8' x 10' trench box, weekly rental plus delivery and installation.
Removal of impacted source area soil	547	CY	$ 20.00	$ 10,946.67	Cost to excavate and load impacted soil based on similar projects. Assumes vertical sidewalls with shoring in deeper saturated source area. Excavations are is 940 SF x 9 ft bgs, 560 SF x 5.5 ft bgs, 155 SF x 5 ft bgs, plus 20% fluff factor.
Loading impacted soil as contained-in waste	30	hours	$ 150.00	$ 4,500.00	Assumes a total of 25 hours of loading time: $70/hour for operator and $80/hour for excavator.
Transportation of contained-in waste Subtitle D soil	105	hours	$ 180.00	$ 18,915.84	Assume that intermodals are transported to the Site for direct load. 3-hour round trip at $180 per hour, which assumes prevailing wage prices. $145 per hour without prevailing wage.
Disposal of contained-in-waste Subtitle D	876	ton	$ 60.40	$ 52,894.29	Assume a CY:tons ratio of 1.6; $1450.0 per intermodal container with 25 tons in each container and a 3.6% Washington State Refuse tax. Also includes $60 for each liner; assuming that the contained-in-waste letter will require liners.
Dewatering system	1	LS	$ 50,000.00	$ 50,000.00	Assumes that dewatering is not required.
S-MZVI Application	1000	lbs	$ 11.75	$ 11,750.00	Assumes 1,000 lbs; application only in source area (400 SF) treatment zone.
Import and Compact clean backfill	876	tons	$ 20.00	$ 17,514.67	Assumes 1:1 replacement of excavated soil.
Site restoration	1	LS	$ 3,500.00	$ 3,500.00	Assumes that site will be restored or finished according to development plans; e.g. asphalt or concrete.
Targeted PlumeStop Injections					
Hydrant permit	1	LS	$ 20,000.00	$ 20,000	Assumes that hydrant costs are not included in Regenesis quote.
Permit for injection of PlumeStop: UIC Permit	74	borings	$ 100.00	$ 7,400	15A NCAC 02C.0200 Well Construction Standards: Criteria and Standards Applicable to Injection Wells; State charges $100 per boring; Included above in surfactant wells.
Design Verification Testing	1	LS	$ 28,000.00	$ 28,000	Pilot test activities to confirm soil parameters and collect soil with a geoprobe, passive flux meters, placed in 2 wells (~$10,000), clear water injection testing, prefield activities to fine tune design. 2-3 days of work.
PlumeStop Injections	32130	lbs	$ 5.48	$ 176,072	Costs from Regenesis quote.
Regenesis Total Services includes coordinating and conducting injection activities	1	LS	$ 282,000.00	$ 282,000	Cost from Regenesis estimate which includes drilling costs and assumes that a large geoprobe can be used and installation of injection wells are not required; supplemental injections are not required.
Traffic Control	5	Day	$ 1,000.00	$ 5,000	Assumes travel lanes will be closed during injections in ROW.
Soil/water drum disposal	1	LS	$ 3,000.00	$ 3,000	Assumes that no soil will be generated and very little water.
SUBTOTAL CONSTRUCTION CAPITAL COSTS				**$ 717,000**	This does not include excavation of source area.

Table D.3

Detailed Costs for Cleanup Action Alternative 2

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION INDIRECT COSTS					
Project Management (Construction)	5	%	DC	$ 35,850	PM Costs for injection activities.
Engineering Design Report and Remedial Action Work Plan	1	LS	$ 100,000.00	$ 100,000	Includes draft and final based on Ecology comments.
Contained-In Waste Application and Determination	1	LS	$ 5,000.00	$ 5,000	Assumes that a contained-in-waste determination is needed. Time includes memo/letter preparations, ecology coordination.
Contractor Coordination and Preparation	1	LS	$ 15,000.00	$ 15,000	Assumes that Floyd|Snider will perform coordination with Regenesis and Regenisis will be the main coordinator for the drillers. Includes 3, 12-hour days of verification testing oversight.
Field management and oversight	525	hours	$ 150.00	$ 78,750	Assumes 12 hours days and pre and post-field prep with 3 hours per day of administrative and reporting tasks; a total of 5 days for excavation and 30 days for targeted injection activities.
Completion report	1	LS	$ 40,000.00	$ 40,000	Completion report for Ecology records.
SUBTOTAL CONSTRUCTION INDIRECT COSTS				**$ 275,000**	
LONG-TERM MONITORING AND CLOSURE					
Project Management	12	Event	$ 1,400.00	$ 16,800	Includes correspondence with adjacent property owners/consultants and sampling coordination of up to 5 years of sampling events. Assumes up to 8 hours of coordination per event.
Groundwater monitoring	12	Event	$ 15,000.00	$ 180,000	Assumes semiannual monitoring the first four years and then 4 consecutive quarterly events to show compliance. COCs and select MNA parameters; includes inflation.
Annual Reporting	4	Event	$ 9,500.00	$ 38,000	Assumes 50 hours of staff time and 10 hours of PM time per annual report; final annual report data will be incorporated into Site closure completion report.
Water drum disposal	3	Event	$ 1,700.00	$ 5,100	Disposal of purged water drums.
Well abandonment activities	63	wells	$ 900.00	$ 56,700	Assumes that most well boxes do no need to be removed, only chipped-in-place and fill with concrete; wells in sidewalks need to be removed and the sidewalk section needs to be replaced. Includes injection wells.
Closure report and Ecology correspondence	1	LS	$ 40,000.00	$ 40,000	Draft and final completion report including Ecology review.
SUBTOTAL LONG -TERM MONITORING AND CLOSURE				**$ 337,000**	
25% Contingency added to remedial construction activities	25	%	DC	$ 179,250	25% contingency added to excavation and injection activities.
Taxes	9	%	DC	$ 64,530	Applicable to excavation and injection activities.
Total				**$ 1,573,000**	

Abbreviations:

CAP Cleanup Action Plan
COC Chemical of concern
CY Cubic yards
Ecology Washington State Department of Ecology
DC Direct cost
lbs Pounds
LS Lump sum
MNA Monitored natural attenuation
PM Project Management
ROW Right-of-way
SF Square feet
S-MZVI Sulfidated micro zero-valent iron

Table D.4
Detailed Costs for Cleanup Action Alternative 3

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION CAPITAL COSTS					
Permit for injection of Bio: UIC Permit	154	borings	$ 100.00	$ 15,400	15A NCAC 02C.0200 Well Construction Standards: Criteria and Standards Applicable to Injection Wells; State charges $100 per boring; Included above in surfactant wells.
EOS Total Cost for products	1	LS	$ 641,000	$ 641,000	Unit costs for each product based on EOS email and includes estimated shipping costs.
Source Area (35x70) Installation of 6 injection points - geoprobe	1	LS	$ 53,000	$ 53,000	Assumes a 12.5-ft ROI and not able to use existing wells.
Shallow and Deep Barrier 2 (120'x250') of 50 injection wells with geoprobe	1	LS	$ 442,000	$ 442,000	Assumes a 12.5 ft ROI. Assumes that shallow and deep borings can be injected into the same geoprobe location and a separate locations are not needed for shallow and deep injections.
Deep Installation Barrier 3 (120'x150') of 30 injection wells with geoprobe or sonic rig	1	LS	$ 265,000	$ 265,000	Assumes a 20 ROI and that injections will be conducted using a geoprobe or sonic rig and wells will not be needed.
Traffic Control	38	Day	$ 1,000.00	$ 38,000	Assumes travel lanes will be closed during injections in ROW.
Soil/water drum disposal	1	LS	$ 3,000.00	$ 3,000	Assumes that no soil will be generated and very little water.
SUBTOTAL CONSTRUCTION CAPITAL COSTS				**$ 1,457,000**	
CONSTRUCTION INDIRECT COSTS					
Project Management	5	%	DC	$ 72,850	PM Costs for injection activities.
Engineering Design Report and Remedial Action Work Plan	1	LS	$ 100,000.00	$ 100,000	Includes draft and final based on Ecology comments.
Contractor Coordination and Preparation	1	LS	$ 20,000.00	$ 20,000	Assumes that Floyd|Snider will coordinate with all subcontractors.
Field management and oversight	1290	Hours	$ 150.00	$ 193,500	Assumes 12-hour days and pre and post-field prep with 3 hours per day of administrative and reporting tasks; a total of 86 days for injection activities.
Completion report	1	LS	$ 40,000.00	$ 40,000	Completion report for Ecology records.
SUBTOTAL CONSTRUCTION INDIRECT COSTS				**$ 427,000**	
LONG-TERM MONITORING AND CLOSURE					
Project Management	16	Event	$ 1,400.00	$ 22,400	Includes correspondence with adjacent property owners/consultants and sampling coordination of up to 7 years of sampling events. Assumes up to 8 hours of coordination per event.
Groundwater monitoring	16	Event	$ 15,000.00	$ 240,000	Assumes semiannual monitoring for the first six years and then 4 consecutive quarterly events to show compliance. COCs and select MNA parameters will be analyzed; includes inflation.
Annual Reporting	6	Event	$ 7,000.00	$ 42,000	Assumes 50 hours of staff time and 10 hours of PM time per annual report; final annual report data will be incorporated into Site closure completion report.
Water drum disposal	4	Event	$ 1,700.00	$ 6,800	Disposal of purged water drums.
Well abandonment activities	63	LS	$ 900.00	$ 56,700	Assumes that most well boxes do no need to be removed, only chipped-in-place and filled with concrete; wells in sidewalks need to be removed and the sidewalk section needs to be replaced. Includes injection wells.
Closure report and Ecology correspondence	1	LS	$ 40,000.00	$ 40,000	Draft and final completion report including Ecology review.
SUBTOTAL LONG -TERM MONITORING AND CLOSURE				**$ 408,000**	
25% Contingency added to remedial construction activities	25	%	DC	$ 364,250	25% contingency added to injection activities.
Taxes	9	%	DC	$ 131,130	Applicable to injection activities.
Total				**$ 2,787,000**	

Abbreviations:

CAP Cleanup Action Plan
COC Chemical of concern
CY Cubic yards
DC Direct cost
Ecology Washington State Department of Ecology
lbs Pounds
LS Lump sum
MNA Monitored natural attenuation
ROI Return on Investment
ROW Right-of-way

Table D.5
Detailed Costs for Cleanup Action Alternative 4

Item Description	Quantity	Unit	Unit Cost	Cost	Notes
CONSTRUCTION CAPITAL COSTS					
Source Area PlumeStop Injections					
Hydrant permit	1	LS	$ 20,000.00	$ 20,000	Assumes that hydrant costs are not included in Regenesis quote.
Permit for injection of PlumeStop: UIC Permit	40	borings	$ 100.00	$ 4,000	15A NCAC 02C.0200 Well Construction Standards: Criteria and Standards Applicable to Injection Wells; State charges $100 per boring; Included above in surfactant wells.
Design Verification Testing	1	LS	$ 15,000.00	$ 15,000	Pilot test activities to confirm soil parameters and collect soil with a geoprobe, passive flux meters, placed in 1 well (~5,000), clear water injection testing, prefield activities to fine tune design. 1-2 days of work.
PlumeStop Injections	12900	lbs	$ 5.48	$ 70,692	Costs from Regenesis quote.
Regenesis Total Services includes coordinating and conducting injection activities	1	LS	$ 54,000.00	$ 54,000	Cost from Regenesis estimate which includes drilling costs and assumes that a large geoprobe can be used and installation of injection wells are not required; supplemental injections are not required.
Soil/water drum disposal	1	LS	$ 3,000.00	$ 3,000	Assumes that no soil will be generated and very little water.
Soil Vapor Point Installation					
Soil vapor point installation	1	LS	$ 6,000.00	$ 6,000	Installation of 2 vapor points.
Soil drum disposal	1	LS	$ 1,700.00	$ 1,700	Minimal soil and water drums.
SUBTOTAL CONSTRUCTION CAPITAL COSTS				**$ 175,000**	
CONSTRUCTION INDIRECT COSTS					
Project Management	5	%	DC	$ 8,750	PM Costs for remediation activities.
Remedial Action Work Plan	1	LS	$ 45,000.00	$ 45,000	Includes draft and final based on Ecology comments.
Contractor Coordination and Preparation (Injection)	1	LS	$ 10,000.00	$ 10,000	Assumes that Floyd|Snider will provide coordination with all contractors except drilling for PlumeStop injection, which will be coordinated with Regenesis. Includes 2, 12-hour days of verification testing oversight.
Contractor coordination and preparation (soil vapor)	1	LS	$ 2,000.00	$ 2,000	Assumes that Floyd|Snider will coordinate with any subcontractors.
Soil vapor analytical costs	2	Event	$ 900.00	$ 1,800	Assumes two sampling events.
Field management and oversight	120	Hours	$ 150.00	$ 18,000	Assumes 12-hour days and pre and post-field prep with 3 hours per day of administrative and reporting tasks; a total of 6 days for limited injection activities and 2 days for vapor point sampling.
Completion report	1	LS	$ 25,000.00	$ 25,000	Completion report for Ecology records.
SUBTOTAL CONSTRUCTION INDIRECT COSTS				**$ 111,000**	
LONG-TERM MONITORING AND CLOSURE					
Project Management	33	Event	$ 1,000.00	$ 33,000	Includes correspondence with adjacent property owners/consultants and sampling coordination of up to 29 years of sampling events. Assumes up to 5.5 hrs of coordination per event.
Groundwater monitoring	33	Event	$ 23,000.00	$ 759,000	Assumes compliance with CULs is reached within approximately 30 years. COCs and select MNA parameters will be analyzed; includes inflation. Annual monitoring for first 25 years, then semiannual monitoring until compliance with CULs.
Annual Reporting	28	Event	$ 9,500.00	$ 266,000	Assumes 50 hours of staff time and 10 hours of PM time per annual report; final annual report data will be incorporated into Site closure completion report.
Water drum disposal	7	Event	$ 1,700.00	$ 11,900	Disposal of purged water drums.
Soil vapor sampling results memorandum	1	LS	$ 8,000.00	$ 8,000	Preparation of a soil vapor results memo and submittal to Ecology.
Closure report and Ecology correspondence	1	LS	$ 15,000.00	$ 15,000	Draft and final completion report including Ecology review.
Well abandonment activities	63	Wells	$ 900.00	$ 56,700	Assumes that most well boxes do no need to be removed, only chipped-in-place and filled with concrete; wells in sidewalks need to be removed and the sidewalk section needs to be replaced. Includes injection wells.
SUBTOTAL LONG -TERM MONITORING AND CLOSURE				**$ 1,150,000**	
25% Contingency added to remedial construction activities	25	%	DC	$ 43,750	25% contingency added to injection and vapor point installation activities.
Taxes	9	%	DC	$ 15,750	Applicable to injection and vapor point installation activities.
Total				**$ 1,496,000**	

Abbreviations:

COC Chemical of concern
CUL Cleanup level
DC Direct costs
Ecology Washington State Department of Ecology
lbs Pounds
LS Lump sum
MNA Monitored natural attenuation
PM Project Management
UIC Underground Injection Control