# Site Investigation Summary Report

## Mercer Megablock Project

### Seattle, Washington

Prepared for
**800 Mercer, LLC and**
**615 Dexter, LLC**

October 15, 2019
19409-04

HARTCROWSER

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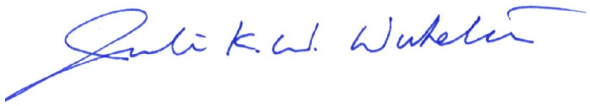
**Prepared by**
**Hart Crowser, Inc.**



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## 1.0 INTRODUCTION

This report presents the results of soil and groundwater site investigation activities completed between March and August 2019 for the Mercer Megablock Project (MMB), located in Seattle, Washington. The location of MMB is shown in Figure 1.

The MMB consists of two separate properties—615 Dexter Avenue North (615 Dexter) and 800 Mercer Street (Broad Block). A map of the MMB and surrounding properties is presented in Figure 2. The areas of concern (AOCs) and current site conditions for both 615 Dexter and Broad Block are provided in Figures 3 and 4, respectively.

## 1.1 General Site Information

### *1.1.1 Site Description and Location*

#### 1.1.1.1 615 Dexter

615 Dexter encompasses an approximately 0.56-acre parcel in the South Lake Union neighborhood in Seattle, Washington. A site plan of 615 Dexter is shown on Figure 3. 615 Dexter consists of a single King County tax parcel (2249000120). The center of 615 Dexter is approximately located at latitude 47.625 North and longitude 122.343 West and is in the northeast quarter of Section 30 in Township 25 North, Range 4 East.

615 Dexter is bound by Aurora Avenue to the west, Roy Street to the north, Dexter Avenue North to the east, and an alley to the south. The elevation of 615 Dexter ranges from approximately 72 feet on the west to 58 feet on the east.

615 Dexter contains one warehouse-style building and two parking lots. 615 Dexter slopes downwards towards the east. 615 Dexter has been previously excavated on the east, where a former portion of the current building resided, so the current building sits at a higher elevation than the lower parking area.

615 Dexter is known as the Seattle DOT Dexter Parcel Site, which has a Facility Site Identification number (FSID) of 81735 and a Cleanup Site Identification number (CSID) of 14785.

#### 1.1.1.2 Broad Block

Broad Block is a 2.8-acre block of land in the South Lake Union neighborhood in Seattle, Washington. Broad Block consists of two King County tax parcels (2249000055 and 2249000006). The center of Broad Block is located at approximately latitude 47.625 North and longitude 122.341 West and is in the northeast quarter of Section 30 in Township 25 North, Range 4 East.

Broad Block is bound by Roy Street to the north, Mercer Street to the south, Dexter Avenue North to the west, and 9th Avenue North to the east. A site plan of Broad Block is shown on Figure 4.

The western half of Broad Block is currently vacant. The eastern half of Broad Block is grass covered and contains two temporary sediment ponds for site stormwater collection. Broad Block contains a combined sewer overflow (CSO) drop structure near the center of the northern boundary, as well as subgrade CSO overflow pipes that extend west, northeast, and south from the structure. The CSO infrastructure also includes a tunnel, which extends southwest from the drop structure.

Broad Block is relatively flat on the west side (elevation 58 feet) and generally slopes down toward the east (elevation 36 feet) on the east side. The near-surface soil of Broad Block has been extensively modified by prior regrading, excavation, and backfilling.

Broad Block is known as the Seattle DOT Mercer Parcels Site, which has a FSID of 27913 and a CSID of 14784.

### *1.1.2 Contact Information*

The following tables summarize contact information for project personnel.

**Table 1 – Contact Information for Responsible Parties for 615 Dexter**

| Party | Address | Contact | Contact Numbers | Email Address |
|---|---|---|---|---|
| Ecology Site Manager | 3190 160th Avenue SE Bellevue, WA 98008 | TBD | TBD | TBD |
| Environmental Consultant (Hart Crowser) | 3131 Elliott Avenue, Suite 600 Seattle, WA 98121 | Julie Wukelic | 206-324-9530 (main office) 206-255-2852 (cell) | Julie.Wukelic@hartcrowser.com |
| Prospective Purchaser (615 Dexter, LLC) | 400 Dexter Avenue North, Suite 200 Seattle, WA 98109 | Maggie Capelle | 206-832-0509 (office) 206-702-7489 (cell) | mcapelle@are.com |
| Current Owner (Seattle Department of Transportation) | 700 Fifth Avenue, Seattle, WA 98104 | Steven Shain | 503-704-6677 (cell) | Steven.Shain@seattle.gov |

Notes: TBD = To be determined.

**Table 2 – Contact Information for Responsible Parties for Broad Block**

| Party | Address | Contact | Contact Numbers | Email Address |
|---|---|---|---|---|
| Ecology Site Manager | 3190 160th Avenue SE Bellevue, WA 98008 | TBD | TBD | TBD |
| Environmental Consultant (Hart Crowser) | 3131 Elliott Avenue, Suite 600 Seattle, WA 98121 | Julie Wukelic | 206-324-9530 (main office) 206-255-2852 (cell) | Julie.Wukelic@hartcrowser.com |
| Prospective Purchaser (800 Mercer, LLC) | 400 Dexter Avenue North, Suite 200 Seattle, WA 98109 | Maggie Capelle | 206-832-0509 (office) 206-702-7489 (cell) | mcapelle@are.com |
| Current Owner (Seattle Department of Transportation) | 700 Fifth Avenue, Seattle, WA 98104 | Steven Shain | 503-704-6677 (cell) | steven.shain@seattle.gov |

Notes: TBD = To be determined.

## 1.2 Site History

A brief historical summary of 615 Dexter and Broad Block is provided below, based on environmental site assessments completed by Hart Crowser (Hart Crowser 2019a and Hart Crowser 2019b) and Shannon & Wilson (Shannon & Wilson, Inc. 2018a and Shannon & Wilson, Inc. 2018b), as well as other historical information from internal and publicly accessible resources.

### *1.2.1 615 Dexter*

At the end of the 19th century and beginning of the 20th century, dwellings and residential units were present on the north and northwest portion of 615 Dexter. The dwellings were demolished between 1917 and 1936. The southern half of the existing building was constructed in 1926.

The building was previously occupied by Rix Sandpaper, Seattle Hardwood Floor Co., and a restaurant in 1935 and by Brown Bridge Mills in 1940. The 1940 Kroll map shows a service station with the address 620 Dexter Avenue North in the northeast corner of 615 Dexter. The 1940 Kroll map also shows two other structures on the east half of 615 Dexter with no labels or addresses. A Puget Sound Regional Archive document with a photograph indicates a small gasoline station at 621 Dexter Avenue North with the building constructed in 1930 (Hart Crowser 2019a).

The northern and eastern buildings were built in approximately 1946. After the 1946 building additions, known occupants and uses of the building include:

- Colotyle Corporation (1950—northern portion)
- Seattle Hardwood Floor Co. (1950—southern portion)
- Plastic mixing, Masonite storage, and storage activities (1950—eastern portion)
- Parker Henry Glass Company (1951)
- Acme Restaurant Supply (1955)
- Pac Bowling and Billiard Company (1955)
- Jr Achievement of Seattle (1960)
- Contour Laminates Inc. Manufacturing, likely a woodworking business (1966 to 1969)
- Domestic Supply Whee (1980)
- Zig Zag (1992 to 1994)
- Dress for Success (2002)
- Copiers Northwest (2002 to present)

In 2005, a fire destroyed the eastern portion of the main building, which was then replaced with a surface parking lot.

### *1.2.2 Broad Block*

The history of Broad Block can be divided into three periods centered around the development of Broad Street (Shannon & Wilson, Inc. 2018a). Broad Street was a major access roadway built in the early 1960s, connecting Interstate Highway 5 to the Seattle Center area. Broad Street previously went diagonally, starting at grade from northeast to southwest, passing underneath Dexter Street, Mercer Street, and Highway 99. Broad Street was later excavated down approximately 20 feet below surrounding grade near the southwest area of Broad Block.

Prior to the development of the Broad Street corridor, Broad Block was a commercial district. Buildings were present on Broad Block as early as 1893, and Lake Union may have extended to the northeast corner of Broad Block. Vine Street ran north-south, bisecting the center of Broad Block and connecting Roy and Mercer Streets, from as early as 1893 through approximately the mid-1950s, though by 1905 had been renamed Eighth Avenue North.

In the late 1800s and early 1900s, only residential dwellings were present on Broad Block, primarily on the west side of Eighth Avenue North though a few were on the east side. By 1917, commercial buildings were also present on the northeast quadrant of Broad Block, and the Lake Union shoreline no longer extended onto Broad Block. The commercial buildings in the northeast quadrant included a commercial sash and door company, horse boarding and sales building, and bakery.

By 1936, the western half of Broad Block was split diagonally by Broad Street, which ran from the northeast to the southwest. The building in the northeast quadrant was occupied by Erickson Painting/Graves Bros Sign Painters and Riebe Soap & Chemical Works from approximately 1925 to 1955. In 1940, West Coast Junk Co. was present in the northeast quadrant as well at 807 Roy Street.

In 1935 and 1940, a gasoline station was present on the southwest portion of Broad Block at 610 Dexter Avenue North. From approximately 1930 to 1955, Newton Auto Wrecking or Shucks Auto Wrecking occupied Broad Block and likely used a parking lot on the eastern portion for wrecked vehicle storage.

Only a few dwellings remained on Broad Block by 1950, in the southwest quadrant. In the 1950s, numerous businesses were present on Broad Block, including auto repair shops, a gasoline station in the northwest area of Broad Block, a restaurant, a paint and sign painting company, and a garment factory with attached office and warehouse; a corral, contractor's general storage, paints, pipe storage, and a work shop were also noted on the 1950 Sanborn map.

In 1958, Broad Street was expanded to an underpass which ran diagonally across the entire Broad Block, (no longer just the western half) from the northeast to the southwest (History Link 2011). Capillary streets connecting to Roy Street and Ninth Avenue North were also constructed during this time. During construction of the underpass, most of the buildings on Broad Block were demolished, and Eighth Avenue North was vacated and no longer crossed Broad Block .

Only two buildings in the northwest corner and one building (800 Mercer Street) on the southwest corner of the east half of Broad Block remained in the late 1950s. The 1969 Sanborn map shows the buildings in the northwest corner include an auto upholstery shop in the previous auto service building and a store adjacent to the auto upholstery shop which was constructed in the 1950s to 1960s. The previous gasoline station is also present in the northwest corner and is also labeled as auto upholstery.

The 800 Mercer Street building on the east half of Broad Block had been expanded to the east in the 1950s to 1960s, and is labeled as a garment factory, office, and warehouse on the 1969 Sanborn map. The 800 Mercer Street building had tenants including a costume shop, sign company, refrigerator sales and service, sign painting, and a hang-gliding shop. By 1974, the buildings in the northwest corner of Broad Block had been removed.

The 800 Mercer Street building was demolished in 2010 to facilitate Mercer Corridor improvements. In 2012 and 2013, aerial photographs show the Broad Street underpass was rerouted, and Mercer Street was widened to include the southern half of the former 800 Mercer Street building. Aerial photography from 2014 shows that the underpass was backfilled to match the existing grades of Mercer and Roy Streets, and all roadways within Broad Block had been removed.

The entire Broad Block was used as a construction staging area until 2016, when sediment ponds for stormwater were installed on the east half of Broad Block. The west half of Broad Block continued to be used as a staging area by Shimmick Construction for construction equipment, parking, and stockpiles until 2019; it is currently vacant.

## 1.3 Site Use

### *1.3.1 615 Dexter*

615 Dexter is zoned as mixed use. 615 Dexter is currently occupied by a surface parking lot and a warehouse building, occupied by Copiers Northwest as a large-scale printing facility, storage warehouse,

and offices. The proposed redevelopment of 615 Dexter includes demolishing the existing building and constructing a residential tower comprised entirely of low-income housing with one level of underground parking.

### *1.3.2 Broad Block*

Broad Block is zoned as mixed use. The east half of Broad Block is currently used for sediment ponds for stormwater detention and the west half is vacant. The proposed redevelopment of Broad Block includes constructing two towers with public spaces, a community center, and two levels of underground parking.

# 2.0 FIELD INVESTIGATIONS

## 2.1 Previous Site Environmental Investigations

Previous investigations and reports for 615 Dexter and Broad Block were reviewed, and the most relevant information is summarized below.

A variety of investigations have been completed on and surrounding the MMB between 1960 and 2018 in support of geotechnical and environmental studies for proposed and completed infrastructure, as well as transportation and utilities programs. The location of relevant historical explorations from 615 Dexter and Broad Block are provided on Figures 5 and 6, respectively.

Phase I and II environmental site assessments (ESA) on 615 Dexter and Broad Block were conducted in 2017 and 2018 by Shannon and Wilson (2018a, 2018b, 2018c, 2018d). Draft Phase I ESAs on 615 Dexter and Broad Block were also conducted in 2019 by Hart Crowser (Hart Crowser 2019a and Hart Crowser 2019b). These studies are summarized below.

### *2.1.1 615 Dexter*

#### 2.1.1.1 Phase I Environmental Site Assessment, Mercer Corridor Project West, 615 Dexter Avenue North, Seattle, Washington. Prepared by Shannon & Wilson, Inc., January 25, 2018

This report identified several recognized environmental concerns (RECs) for 615 Dexter, including:

- A 2,000-gallon solvent storage tank was present in the alley south of 615 Dexter in 1950.
- In 1950, there was a plastic mixing room inside the building.
- A Seattle Fire Department document dated 1997 shows three 1,000-gallon heating oil underground storage tanks (USTs) and one 1,000-gallon bunker oil UST existed in the alley directly south of the building on 615 Dexter. The report noted that the current status of the USTs was unknown.
- The east half of the current building burned down in roughly 2005. This event may have resulted in polycyclic aromatic hydrocarbon (PAH) or metal contamination in shallow subsurface soils.
- An old boiler and coal appeared to have been used at 615 Dexter for heating or manufacturing.

- Floor drains are present in the building. Floor drains can provide a pathway for contaminants to enter the subsurface.

- The parcel adjacent to the northeast (700 Dexter Avenue North) has been occupied by American Linen, Maryatt Electric Laundry, and a small gasoline station. This property, as well as all contamination originating from this property, has been identified as the American Linen Supply Co. Dexter Avenue Site (American Linen Site). The American Linen Site has known tetrachloroethylene (PCE), trichloroethylene (TCE), and petroleum contamination in soil and groundwater.

- Mutual Laundry operated 200 feet south of 615 Dexter in 1917.

- An oil burner sales and facilities business was present on the adjacent west parcel in 1950.

- The adjacent parcel to the south was formerly occupied by a laundry and gasoline station.

#### 2.1.1.2 Limited Phase II Environmental Site Assessment, Mercer Corridor West Expansion, 615 Dexter Avenue North, Seattle, Washington. Prepared by Shannon & Wilson, Inc., January 25, 2018

The limited Phase II ESA consisted of completing seven push-probe explorations and submitting selected soil (10) and grab groundwater (3) samples for chemical analysis of petroleum hydrocarbons, metals, volatile organic compounds (VOCs), and PAHs. This report noted the following results and conclusions.

- Gasoline-range petroleum hydrocarbon (GRO) concentrations above the Model Toxics Control Act (MTCA) Method A cleanup levels are present in soil and groundwater in the south side of the lower parking lot. This area is near the historical gas station on the adjacent parcel to the south of 615 Dexter, which is the likely source of this contamination.

- Heavy oil-range petroleum hydrocarbon (HRO) concentrations below MTCA Method A cleanup levels are present in soil in the alley. This contamination is likely due to heating oil USTs which were noted in this alley. The contamination may extend underneath 615 Dexter.

- VOCs related to GRO contamination, including ethylbenzene, xylenes, and naphthalene, are present below MTCA Method A cleanup levels in soil and groundwater in the exploration closest to the historical gas station. Chlorinated hydrocarbons related to dry cleaner contamination (i.e., chlorinated solvents) were not observed in soil or groundwater at 615 Dexter.

- PAHs were detected in soil below MTCA Method A cleanup levels in the lower parking lot near the historical gas station. PAH contamination related to the previous fire at 615 Dexter does not appear to be present or may be limited in extent.

- Drains at 615 Dexter do not appear to have been used for disposal purposes, as no constituents were detected at concentrations exceeding MTCA Method A cleanup levels in subsurface soils or groundwater samples from two borings located near drains.

- Metals were not detected in soil or groundwater above MTCA Method A cleanup levels.

### 2.1.1.3 Draft Phase I Environmental Site Assessment, 615 Dexter Avenue North, Seattle, Washington. Prepared by Hart Crowser, May 8, 2019.

This report identified several RECs for 615 Dexter, including:

- A service station was located in the southeast corner of 615 Dexter (with an address of 620 Dexter Avenue North) in 1940.
- The adjacent parcel to the northeast identified as 700 Dexter Avenue North was formerly occupied by a large laundry and dry-cleaning facility and a gasoline station. Soil and groundwater contamination have been documented at this site which is currently undergoing additional interim remedial actions under an Agreed Order between the Washington State Department of Ecology (Ecology) and the current owner, BMR-Dexter, LLC.
- The adjacent parcel to the south identified as 601 Dexter Avenue North was formerly occupied by a laundry and gasoline station.
- Seattle Fire Department records indicated four USTs containing heating oil or bunker fuel were located in the alley south of 615 Dexter. The USTs were reportedly pumped and rinsed in 1997, but no further records of the USTs were listed in any other documentation.
- Four steel solvent tanks totaling 2,000 gallons were noted as being present in the alley south of 615 Dexter in 1950. No further records of the USTs were listed in any other documentation and the status of the four tanks remains unknown. It is not known whether these four USTs are the same as the previously mentioned USTs documented by the Seattle Fire Department.
- A plastic mixing facility occupied the eastern building on 615 Dexter in 1950, when Colotyle Corporation was the tenant.
- An oil burner sales and service facility was adjacent to the southwest of 615 Dexter, across Aurora Avenue North, in 1950.
- The 2018 Limited Phase II ESA identified GRO in soil and groundwater with concentrations above and below MTCA Method A cleanup levels in isolated areas at 615 Dexter. Additionally, HRO, metals, PAHs, and VOCs had detected concentrations below MTCA Method A cleanup levels.

This report recommended further characterization of GRO impacts in soil and groundwater to fully delineate and/or confirm the areas of impacts discovered and a soil vapor investigation to evaluate the potential for vapor intrusion.

The report also noted that while not a REC, asbestos-containing material (ACM) is present in building materials at 615 Dexter, primarily in various sizes of vinyl floor tile and black mastic below carpeting and on concrete flooring. ACM was also confirmed in textured ceiling material, pipe insulation, mudded pipe elbow, canvas on black tar paper on corrugated cardboard, thermal system insulation, and window frame caulking. Other assumed ACM included roofing material, older HVAC units on the south roof, wall-mounted gas heaters, electrical panels, and fire doors. Lead-based paint (LBP) was confirmed on

warehouse ceiling and support beams, an exterior wall, a wood window frame, and a bathroom wall. Polychlorinated biphenyl (PCB) ballasts in fluorescent light fixtures and mercury-containing fluorescent light tubes and thermostat were also observed. This report noted that an AHERA-level survey must be conducted, and all regulated materials abated prior to demolition or remodel of the building.

### *2.1.2 Broad Block*

#### 2.1.2.1 Phase I Environmental Site Assessment, Mercer Corridor Project West, Broad MegaBlock Site, Seattle, Washington. Prepared by Shannon & Wilson, Inc., January 25, 2018

This report identified the several RECs for Broad Block, including:

- A gas station operated in the southwest corner of Broad Block prior to 1960.
- A gas station operated in the northwest corner of Broad Block. One fuel UST potentially remains, and one fuel UST has been removed.
- A building near the north-central portion of Broad Block was used for soap and chemical manufacturing prior to the 1960s. A boiler room was used in the building, suggesting the presence of a heating oil UST.
- A building on the northeast corner of Broad Block was used by multiple auto wrecking companies. The building had a large parking lot covering the east side of Broad Block, which was used for the storage of wrecked cars.
- A building near the south-central portion of Broad Block (800 Mercer Street) was used by multiple tenants including a refrigerator repair service. The building had a 1,000-gallon diesel UST though no evidence was found indicating whether it was still present.
- Fill material from unknown sources was used on Broad Block to fill a in a previous ramp to an underpass, as well as where Lake Union formerly resided in the northeast corner.
- A property (601 Dexter Avenue North) adjacent to the west of Broad Block has previously been occupied by a gas station and a laundry. Multiple USTs containing solvents, heating oil, and bunker fuel were reported to have been present in the alleyway to the north of this parcel.
- A property (700 Dexter Avenue North) adjacent to the north of Broad Block was occupied by a very large laundry/dry-cleaning facility, as well as a gas station. This property, as well as all contamination originating from this property, has been identified as the American Linen Site. A chlorinated VOC (cVOC) groundwater plume originating from the property extends onto and beneath Broad Block and continues onto other downgradient properties.
- A property (525 Dexter Avenue North) adjacent to the southwest and upgradient of Broad Block was formerly occupied by a gasoline station.
- A property (800 Roy Street) adjacent to the north of Broad Block had multiple USTs and leaking USTs present, with documented petroleum-contaminated soil and groundwater.

- A property (701 Ninth Avenue North) adjacent to the north of Broad Block was shown by the Environmental Data Resources, Inc. data report to have petroleum contamination in soil and groundwater, as well as halogenated solvents suspected in groundwater. This site was not listed in any other records, and the contamination may be due to contamination from the American Linen Site or 800 Roy Street.

- A property (601 Westlake Avenue North) adjacent to the east of Broad Block was formerly occupied by multiple dry cleaners, gasoline stations, auto repair shops, and auto wreckers. Petroleum and metals contamination in soil and shallow groundwater was discovered on the property.

- A property (King County tax parcel 1988201410) adjacent to the south and upgradient of Broad Block was formerly occupied by a bank building which had a boiler and an oil burner for heat, suggesting a heating oil UST was present.

- The 1917 Sanborn map shows Mutual Laundry approximately 200 feet downgradient of Broad Block to the southwest.

This report also identified the following historical RECs (HRECs).

- A property (850 Republic Street) adjacent to the south of Broad Block was previously used by Washington Natural Gas for the manufacturing of coal gas until the mid-1950s. This property had multiple USTs and two approximately 1-million-gallon aboveground storage tanks (ASTs). Contamination was discovered on the property, and Ecology issued a no further action (NFA) letter for the site in 2012.

- A property (535 Westlake Avenue North) adjacent to the southeast of Broad Block formerly contained a 2,500-gallon UST. The UST was removed in 2013 and Ecology issued an NFA letter in 2014.

#### 2.1.2.2 Limited Phase II Environmental Site Assessment, Mercer Corridor West Expansion, Broad Megablock Property, 800 Mercer Street, Seattle, Washington. Prepared by Shannon & Wilson, Inc., January 25, 2018

The limited Phase II ESA consisted of completing 11 push-probe explorations and submitting selected soil (15) and grab groundwater (4) samples for chemical analysis of petroleum hydrocarbons, metals (total and dissolved), VOCs, and PAHs. This report noted the following results and conclusions.

- Detectable concentrations of HRO were found in soil in the southwest corner and in the northeast corner of Broad Block. All concentrations were below the MTCA Method A cleanup level.

- Petroleum contamination in groundwater is present beneath Broad Block. HRO was detected at a concentration above the MTCA Method A cleanup level in the east side of Broad Block. The extent of groundwater contamination was not known.

- HRO concentrations were detected below cleanup criteria in sediment sampled from the stormwater pond. This detection is likely a result of drips from construction vehicles and/or vehicles on the western portion of Broad Block being washed into the pond by stormwater.

- PAHs in soil were not detected above MTCA Method A cleanup levels. One sample from the southwest corner showed detectable levels of PAHs, which may be due to water used to put out a fire on the parcel adjacent to the west, or the use of asphalt in that area.

- Soil with lead concentrations exceeding the MTCA Method A cleanup level was seen in one sample in the northeast corner of Broad Block. This contamination is likely due to the previous auto wrecker on the site, or fill used in this area.

- Limited sampling of fill material shows the fill may be impacted. Samples taken in the fill material showed detectable levels of PAHs, HRO, and metals.

- VOC contamination (i.e., PCE, TCE, cis-1,2-dichloroethylene [cDCE], and vinyl chloride) was detected at concentrations exceeding applicable MTCA Method A or B cleanup levels in groundwater in monitoring wells MW-119 and FMW-129. These wells are part of the American Linen Site monitoring network, and it appears that the groundwater from the American Linen Site extends onto the eastern portion of Broad Block.

- Total arsenic and lead concentrations in groundwater exceeded MTCA Method A cleanup levels in the eastern boundary of Broad Block. Lead contamination is likely due to the high level of lead found in one soil sample in that area, and detectable levels of lead in soil in each sample in that area. Elevated arsenic concentrations are likely due to background levels of arsenic in soil being present in the unfiltered groundwater sample. All dissolved metal samples were well below applicable cleanup criteria.

#### 2.1.2.3 Draft Phase I Environmental Site Assessment, Broad Block, 800 Mercer Street, Seattle, Washington. Prepared by Hart Crowser, May 13, 2019

This report identified several RECs for Broad Block, including:

- Four gasoline stations formerly operated on Broad Block—one in the southwest corner (610 Dexter Avenue North from approximately 1935 to 1940), two in the northwest corner (650 Dexter Avenue North from approximately 1951 to 1960), and one in the northeast corner (613 Eighth Avenue North in 1940). One UST may remain in the northwest corner. There are no records of any USTs being removed from Broad Block, except for one also previously located in the northwest corner.

- Multiple automobile wrecking companies occupied a building and large parking lot on the northeastern corner of Broad Block in the 1930s through 1950s. The parking lot associated with these businesses stored many wrecked automobiles throughout the duration of its occupancy.

- A soap and chemical manufacturing facility (Riebe Soap & Chemical Works) and painting business (Erickson Painting/Graves Bros Sing Painters) occupied a former building on the north-central portion of Broad Block from approximately 1925 to 1955.

- In 1950, an automotive upholstery business was located at 624 Roy Street in the northwest corner of Broad Block, adjacent to the 650 Dexter Avenue North gasoline station.

- In 1950, an automobile repair business was located at 621 Eighth Avenue North in the central area of Broad Block.
- During construction activities of installing the underpass (early 1930s) and filling the underpass (mid-2010s), fill material from unknown sources may have been used.
- A property (615 Dexter Avenue North) adjacent to the west of Broad Block was formerly occupied by a service station.
- A property (601 Dexter Avenue North) adjacent to the west of Broad Block was formerly occupied by a laundry and service station.
- At least four USTs containing solvents, heating oil, or bunker fuel were present beneath the alley adjacent to the west of Broad Block between 601 and 615 Dexter Avenue North.
- A property (700 Dexter Avenue North) adjacent to the north of Broad Block was formerly occupied by a large laundry/dry-cleaning facility and a gasoline station. This site is known as the American Linen Site and has documented soil and groundwater contamination. The American Linen Site is currently undergoing additional interim remedial actions under an Agreed Order between Ecology and the current owner, BMR-Dexter, LLC.
- A property (701 Ninth Avenue North) adjacent to the north of Broad Block has reported petroleum contamination in soil and groundwater and halogenated solvents as a potential contaminant in groundwater.
- A property (525 Dexter Avenue North) adjacent to the southwest of Broad Block across Mercer Street was formerly occupied by a service station.
- A property (800 Roy Street) adjacent to the north of Broad Block across Roy Street, owned by Seattle City Light, has or had multiple USTs and leaking USTs, with documented soil and groundwater contamination.
- A property (601 Westlake Avenue North) adjacent to the east of Broad Block across Ninth Avenue North was formerly occupied by multiple laundry-cleaning services, gasoline stations, automobile repair shops, and automobile wrecking facilities. Remediation of soil and groundwater contamination has been conducted; however, there is documented contamination on the northeast side of the parcel.
- A property (King County tax parcel 1988201410) adjacent to the south of Broad Block across Mercer Street previously had a boiler and oil-burner, which may have the possibility of a remaining UST on this parcel.
- A property (815 Mercer Street) adjacent to the south of Broad Block across Mercer Street historically operated a coal gasification plant. Extensive redevelopment and a cleanup have been completed on the site. The site received an NFA letter from Ecology and is considered an HREC.

- A property (535 Westlake Avenue North) adjacent to the southeast of Broad Block across Mercer Street historically contained a 2,500-gallon leaking UST. An NFA letter was issued by Ecology in 2013 and the site is considered an HREC.

- The 2018 Limited Phase II ESA on Broad Block identified soil with lead concentrations exceeding the MTCA Method A cleanup level and groundwater with HRO, chlorinated solvents, total lead, and total arsenic concentrations exceeding applicable MTCA Method A cleanup levels.

This report recommended further characterization of the chlorinated solvent-impacted soil and groundwater from the American Linen Site to delineate the horizontal and vertical extent of impacts on Broad Block. Additionally, the report recommended further characterization of the petroleum soil and groundwater impacts on Broad Block to delineate the extent of impacts and a soil vapor investigation to evaluate the potential for vapor intrusion.

## 2.2 Previous Off-Site Environmental Investigations

As noted in Section 2.1, several properties adjacent to 615 Dexter and Broad Block have known soil and/or groundwater contamination. Previous environmental investigations on the sites most likely to have impacted 615 Dexter and Broad Block are summarized below. Information on these investigations was summarized from internal and publicly available resources.

### *2.2.1 American Linen Site*

The American Linen Site at 700 Dexter Avenue North was formerly occupied by an industrial laundry and dry-cleaning facility that operated between 1925 and 1995. A gasoline service station also operated in the northwest corner of the American Linen property in the 1930s and a pump island and USTs were located in the northeast corner of the American Linen property in the 1960s. These operations were ceased as the American Linen operations expanded. In the 1990s, two Phase II ESAs were conducted to assess soil and groundwater conditions, and several other environmental investigations were conducted on adjacent properties in the 2000s. A remedial investigation was conducted between 2012 and 2016. These investigations discovered soil, soil vapor, and/or groundwater contaminated with gasoline-, diesel-, and oil-range petroleum hydrocarbons; PCE; TCE; vinyl chloride; and/or cDCE beneath the American Linen property and portions of the south- and east-adjoining properties, as well as beneath the Eighth, Ninth, and Westlake Avenues North and Valley, Roy, and Broad Streets rights-of-way.

Four 6,000-gallon heating oil USTs associated with the former laundry boiler system and one 500- to 600-gallon UST were removed from the American Linen Site in 2013. Between April and December 2013, an electrical resistance heating/soil vapor extraction (ERH/SVE) system was designed, installed, and operated to reduce high concentrations of chlorinated solvents in soil and groundwater. In 2016, pilot testing was conducted to evaluate the use of enhanced reductive dichlorination (ERD). Additional investigations were conducted in 2017 and 2018 to fill data gaps and collect groundwater samples.

The American Linen Site is currently undergoing additional interim remedial actions under an Agreed Order between Ecology and the current owner, BMR-Dexter, LLC. The interim remedial action consists of implementing a series of *in-situ* chemical oxidation (ISCO) injections followed by emulsified vegetable oil

(EVO) injections with bioaugmentation and excavating contaminated soil. The American Linen property is planned to be redeveloped with two 14-story office towers, on-street retail, and three levels of underground parking.

# 3.0 SITE INVESTIGATION SCOPE OF WORK

Our scope of work for the site investigation consisted of the following:

- Completed 34 soil explorations borings to depths of 90 feet using a combination of sonic, hollow-stem auger (HSA), and push-probe drilling methods. Ten borings were completed on 615 Dexter and twenty-four borings were completed on Broad Block. The locations of site explorations on 615 Dexter and Broad Block are shown on Figures 5 and 6, respectively.
- Collected soil samples from the soil explorations. Selected soil samples were submitted for laboratory analysis of metals, petroleum hydrocarbons, and VOCs.
- Collected grab groundwater samples from 20 explorations. Four grab samples were collected from 615 Dexter and fifteen grab samples were collected from Broad Block.
- Installed 11 monitoring wells in selected borings. One monitoring well was completed on 615 Dexter and ten monitoring wells were installed on Broad Block (Figures 5 and 6).
- Measured the depth to water in the new and selected historical monitoring wells. Pressure transducers were installed in selected wells to collect continuous water level data.
- Collected a groundwater sample from each new monitoring well and submitted selected samples for laboratory analysis of petroleum hydrocarbons, VOCs, metals (total) and PAHs.
- Conducted slug testing on the new monitoring wells to determine hydraulic conductivity of the formation.
- Submitted selected soil samples for mechanical grain size analysis.

# 4.0 SITE ACTIVITIES SUMMARY

Our investigation was conducted to: (1) evaluate the current soil and groundwater quality at the MMB; (2) evaluate the extent of VOC migration onto or beneath the MMB from the adjacent American Linen Site; and (3) determine what additional data may be needed to fully delineate the nature and extent of environmental contamination on, beneath, and/or originating from the MMB and adjacent properties.

## 4.1 Areas of Concern

We subdivided the MMB into nine AOCs based on historical activities and potential environmental concerns. The AOCs are shown in Figures 3 and 4 and summarized below.

### 4.1.1 AOC 1 – 615 Dexter

AOC 1 is located on 615 Dexter (Figure 3). Potential environmental concerns include a former gasoline station; former USTs containing heating oil, bunker fuel and, possibly, solvents located in the alleyway adjacent to the south; a former plastic mixing facility (Colotyle Corporation) within the eastern portion of the existing building; and various other historical light industrial and commercial businesses that operated on 615 Dexter.

### 4.1.2 AOC 2 – Former Northwest Gas Station

AOC 2 is located in the northwest corner of Broad Block. Potential environmental concerns within AOC 2 included a former gasoline service station which operated from 1930 to 1960s, and abandoned USTs associated with former service stations

### 4.1.3 AOC 3 – Former Soap and Chemical Manufacturing Facility

AOC 3 is located in the northcentral part of Broad Block. Potential environmental concerns within AOC 3 include light industrial and commercial practices in the former buildings along Roy Street from the 1920s to 1960s, including a soap manufacturer (Riebe Chemical Works), painting company, cabinet and millwork business, and sign company.

### 4.1.4 AOC 4 – Former Auto Wrecking Area and Storage Area

AOC 4 is located at the eastern end of Broad Block. Potential environmental concerns within AOC 4 include a former auto wrecking business in the 1930s to 1940s and contractor's general storage area in the 1940s to 1950s. This area has been vacant of any buildings since at least 1969. Soils in this area have been substantially disturbed and graded since these historical uses (pre-1950).

### 4.1.5 AOC 5 – Former Refrigerator Service/UST

AOC 5 is located on the south-central portion of Broad Block. Potential environmental concerns within AOC 5 include a former refrigerator service, garment factory, and a variety of office and warehouse uses in the building (800 Mercer Street) formerly at this location. Historical records indicate a UST was associated with the 800 Mercer Street building, though no records of its removal or any releases were found. This area has been substantially disturbed and graded since these historical uses (pre-1970).

### 4.1.6 AOC 6 – Former Southwest Gas Station

AOC 6 is located on south side of Broad Block. Potential environmental concerns within AOC 6 include a former gasoline station and auto repair business and a paint store. This area has been substantially disturbed and graded since the 1960s.

### 4.1.7 AOC 7 – Downgradient of 601 Dexter Avenue North Property

AOC 7 is located at the southwest corner of Broad Block. There is a potential for contaminated soil and groundwater migration from adjacent properties.

### *4.1.8 AOC 8 – Central Area of Broad Block*

AOC 8 is the central area of Broad Block. This area has the potential for cVOC-contaminated soil due to migration from the adjacent American Linen Site.

### *4.1.9 AOC 9 – American Linen Site Groundwater Plume*

AOC 9 covers the area under which the American Linen Site groundwater plume has migrated onto and beneath Broad Block.

## 4.2 Soil Explorations

Hart Crowser completed 34 explorations in March 2019. The explorations consisted of 13 push-probe, 3 sonic, and 18 HSA borings to depths of 25 to 90 feet. The locations of the explorations are shown on Figures 5 and 6 for 615 Dexter and Broad Block, respectively. The new and historical explorations are summarized in Table 3 and the new exploration logs are presented in Appendix A. Historical exploration logs are also provided in Appendix B. Selected soil samples were analyzed for grain size with the results summarized in Table 4 and presented in Appendix C.

## 4.3 Monitoring Wells

Hart Crowser completed 11 of the explorations as monitoring wells. The wells were completed at depths ranging from 20 to 90 feet, and the location of the wells are shown on Figures 5 and 6 for 615 Dexter and Broad Block, respectively.

The wells were classified into four categories based on the depth: shallow, intermediate (A or B), or deep wells. Shallow wells (DMW-1S, HMW-1S, and HMW-2S) were screened from depths of 10 to 30 feet. Intermediate A wells (HMW-1IA, HMW-2IA, HMW-3IA, and HMW-4IA) were screened from depths of 40 to 45 feet. Intermediate B wells (HMW-2IB) were screened from depths of 40 to 50 feet. Deep wells (HMW-1D, HMW-2D, and HMW-3D) were screened at depths from 80 to 90 feet.

The wells were constructed with 10-foot screens using Schedule 40 PVC blank and screen. Well construction details for new and historical wells are provided in Table 3. Details of monitoring well construction and well construction logs are presented in Appendix A. Historical monitoring wells are located on Figures 5 and 6 for 615 Dexter and Broad Block, respectively, and logs are included in Appendix B.

The news monitoring wells were developed shortly after well construction by over-pumping and surging with a stainless-steel bailer to remove a minimum of ten well casing volumes of water.

## 4.4 Surveying

Top-of-monument and top-of-casing elevations and horizontal locations for the new monitoring wells were surveyed on April 1, 2019, by Bush, Roed and Hutchings, Inc. (Table 3). The horizontal datum was referenced to the Washington State Plane North (NAD 83/91) coordinate system and the vertical datum was referenced to mean sea level (NAVD 88). Horizontal and vertical measurements are accurate within 0.01 foot. The available surveyed coordinates and elevations for historical and new monitoring wells are

presented in Table 3. The locations of the monitoring wells are shown on Figures 5 and 6 for 615 Dexter and Broad Block, respectively.

# 4.5 Geology

## *4.5.1 Site Geology*

Our understanding of the subsurface geology at the MMB is based on our interpretation of 34 new and multiple historical borings completed on and in the area surrounding MMB.

Soil encountered beneath the MMB consists of fill, glacial deposits, and non-glacial deposits consistent with previous studies in the area (SES 2016; PES 2018). To simplify the complex geology, we developed subsurface cross sections showing distribution of gravels, silty sand, sand, and fines (clay, silt) across the MMB. Subsurface cross sections for 615 Dexter are provided in Figures 7 and 8. Subsurface cross sections for Broad Block are shown on Figures 9 through 13.

The identified geological units are described below.

### 4.5.1.1 Fill

Fill is comprised of poorly graded sand with gravel, silty sand, silty sand with gravel, some silt, all with variable gravel and cobbles. Fill also contains brick, concrete, and glass debris. The fill was mapped as a separate unit in the subsurface cross sections.

Very little fill was observed in the borings at 615 Dexter. Fill depths of up to 3 feet below ground surface (bgs) were observed in borings DGW-2 and DPP-1. No other deposits interpreted as fill were encountered in other borings at 615 Dexter.

Varying fill depths were observed at Broad Block. Fill was used to fill the former Broad Street alignment which is likely to range from less than 2 feet to over 20 feet in thickness. Near borings MBGW-8 and HMW-3IA, fill depths of approximately 5 feet were observed. The thickest fill was observed in HMW-4IA at 22.5 feet bgs completed within the alignment of former Broad Street. Most borings encountered 12 to 18 feet of fill material.

### 4.5.1.2 Lake Deposits

Recent lake deposits associated with Lake Union consist of poorly graded sand, silty sand with gravel and sandy silty with gravel which contain varying amounts of organics, peat, and shell fragments. The lake deposits were formed in shoreline to lake bottom depositional environments. Lake deposits were not identified on 615 Dexter. The lake deposits were observed in the eastern portion of Broad Block generally eastward from boring MBGW-2. Lake deposits seen in MBGW-2 from 14.5 feet bgs to 27 feet bgs contained more sand representing shoreline deposits. Lake deposits in HMW-1IB were seen at depths of 17 feet bgs to 27 feet bgs and from 17.5 feet bgs to 30 feet bgs in boring MBGW-15. These lacustrine deposits represented shallow lake bottom sediments and are comprised of soft to medium stiff silt and clay with fine organics, shells, and peat.

#### 4.5.1.3 Glacial Till Deposits

Glacial deposits comprised of glacial till and ice contact deposits were observed underlying all the MMB. The deposits are composed of very dense silty sand to silty sand with gravel. Interbedded in these deposits are layers of poorly graded sand, sandy silt, and silt. Varying degrees of gravel and cobbles were seen. All explorations at 615 Dexter were advanced in this material. Ice contact/till deposits were observed to a depth of 73 feet bgs in exploration HMW-3D and to a depth of 60 feet bgs in exploration HMW-2D. Boring MBGW-8 displayed ice contact deposits/till beginning from 20 feet bgs to 50 feet bgs. Till deposits are observed in HMW-2D from depths of 70 feet bgs to 80 feet bgs and from 55 feet bgs to 70 feet bgs in HMW-1D. These deposits appear to be absent in borings MBGW-2, HMW-1IB, and HMW-1D. .

#### 4.5.1.4 Glacial Outwash Deposits

Glacial outwash deposits are seen across the MMB. These deposits are composed of dense to very dense poorly graded sand with varying amounts of silt and gravel. In HMW-1IB and HMW-1D well borings, outwash deposits were observed at depths of approximately 35 feet bgs to 45 feet bgs and 35 feet bgs to 65 feet bgs, respectively. On the eastern side of Broad Block in boring HMW-4IA, outwash deposits were observed at a depth of 73 feet bgs to bottom of boring at 81.5 feet bgs. Older outwash deposits are characterized by poorly graded sand with silt and varying degrees of gravel and are observed from 80 feet bgs to bottom of boring at 90 feet in HMW-2D. In HMW-1D, these outwash deposits are encountered from 70 feet bgs to bottom of boring at 90 feet bgs.

## 4.6 Hydrogeology

The hydrogeology of MMB consists of discontinuous water-bearing zones in the glacial till deposits, and a deeper water-bearing zone in the glacial outwash deposits. The water-bearing deposits have been subdivided historically (SES 2013; PES 2018) into 4 zones (shallow, intermediate “A” and “B,” and deep) based on soil type and depth.

The uppermost zone is the shallow zone is an unconfined water-bearing zone in the fill, lacustrine deposits, and upper portion of the glacial till/ice-contact deposits (corresponding to the fill and silty sand on the cross sections). The intermediate A and B zones are a dense to very dense, semi-confined to confined water-bearing zone in the glacial till/ice-contact deposits, which serves as a leaky aquitard (corresponding to the interbedded unit shown on the cross-sections). The deep zone is a deeper, very dense, confined water-bearing zone in the glacial outwash deposits (corresponding to the gravel/sand units shown on the cross sections). The bottom of the glacial outwash was not encountered in any of the explorations completed for this investigation.

### *4.6.1 Groundwater Elevations*

The depth to water was measured manually in the new monitoring wells and on existing wells in the MMB monitoring well network in March 26 and July 16 and 17, 2019. Pressure transducers to provide continuous water level measurements were installed in selected intermediate (MW-119, HMW-1IB, HMW-2IA, HMW-2IB, and HMW-4IA) and deep monitoring wells (HMW-1D, HMW-2D, HMW-3D, and FMW-129).

Manual monitoring well groundwater elevation data is summarized and presented in Table 5. Groundwater elevations based on the March 26, 2019 measurements from shallow, intermediate A, intermediate B, and deep wells are presented on Figures 14, 15, 16, and 17, respectively.

The depth to water in March 2019 ranged from 16.11 to 38.90 feet, with the highest groundwater elevations on the west side of Broad Block and the lowest groundwater elevations on the eastern side. Groundwater flow based on measurements from shallow and intermediate wells on March 26, 2019 was generally towards the east at an average gradient of 0.02 foot/foot. Groundwater elevations in deep wells is variable with the highest water levels observed in the central portion of Broad Block (HMW-2D). Groundwater levels in the deep wells (17 to 19 feet) are similar to Lake Union water levels (16 to 18 feet) and historically groundwater flow direction has been to the east, towards Lake Union. Groundwater elevations are higher in shallow wells (e.g., HMW-1S) and lower in the corresponding deep wells (e.g., HMW-1D) suggesting that the potential vertical gradient is downward.

### *4.6.2 Slug Testing*

Slug tests were performed on the 11 new monitoring wells to determine the hydraulic conductivity of the formation. The results are summarized in Figure 18 and presented in Appendix C.

Slug tests are performed by suddenly inserting or removing a solid PVC rod in a well and measuring the recovery of the water levels during the test. A test conducted by the insertion of the PVC rod into the well is referred to as a falling head test and the following removal of the rod is called a rising head test. The slug test analysis is based on the Bouwer and Rice method to obtain an estimated value of hydraulic conductivity of the aquifer.

A summary of slug testing results is provided in Table 6. Hydrographs and slug test plots for all wells are provided in Appendix C. Average hydraulic conductivities determined from slug tests range from 5.5 x $10^{-5}$ to 5.6 x $10^{-3}$ centimeters per second (0.2 to 15.9 feet per day).

## 5.0 SAMPLING AND ANALYTICAL RESULTS

A summary of the results of soil and groundwater sampling and analysis are presented in Sections 5.1 and 5.2, respectively. The results of findings for individual AOCs are presented in Section 5.3.

The detected concentrations were compared with applicable MTCA Method A and B cleanup levels for soil and MTCA Method A and B cleanup levels and Maximum Contaminant Levels (MCL) for groundwater obtained from the Ecology Cleanup Levels and Risk Calculation (CLARC) tables (Ecology 2019).

For purposes of this report, petroleum hydrocarbons (TPH) includes gasoline- and diesel-range organics, PAHs, and petroleum-related VOCs including benzene, toluene, ethylbenzenes, xylenes (BTEX) and other related VOCs. cVOCs refers to the chlorinated hydrocarbons PCE and related degradation products including TCE, cCDE, trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC).

Selected soils samples were analyzed for one or more of the following constituents using the following laboratory methods:

- GRO – Ecology Method NWTPH-Gx;
- Diesel-range petroleum hydrocarbon (DRO) and HRO – Ecology Method NWTPH-Dx;
- PAHs – U.S. Environmental Protection Agency (EPA) Method 8270 SIM;
- VOCs – EPA Method 8260B; and
- Total metals (Resource Conservation and Recovery Act [RCRA] 8) – EPA Methods 6010D/7471B/6020B.

Groundwater samples were analyzed for one or more of the following constituents using the following laboratory methods:

- GRO – Ecology Method NWTPH-Gx;
- DRO and HRO – Ecology Method NWTPH-Dx;
- PAHs – EPA Method 8270 SIM;
- VOCs – EPA Method 8260B;
- Total and dissolved metals (RCRA 8) – EPA Methods 200.8/7470A; and
- Total suspended solids (TSS) – Standard Method (SM) 2540D.

Because of the high total suspended solid concentrations in grab groundwater samples, only dissolved (filtered) results were used for comparing metals concentrations to applicable MTCA cleanup levels.

The MTCA cleanup levels are presented in the Table 7. Details regarding the Hart Crowser soil and groundwater sampling procedures and borings logs are presented in Appendix A. A summary of the analytical field screening results and analytical program is provided in Appendix E. Review of chemical data quality and laboratory reports are included in Appendix F.

### Table 8 — Summary of Samples Submitted for Chemical Analysis

| Number Soil Samples Analyzed | 615 Dexter | Broad Block | Total |
|---|---|---|---|
| Gasoline (GRO) | 30 | 72 | 102 |
| Diesel (DRO-HRO) | 33 | 76 | 109 |
| PAHs | 2 | 5 | 7 |
| VOCs | 45 | 114 | 159 |
| Metals | 26 | 32 | 58 |
| **Number Groundwater Samples Analyzed** | **615 Dexter** | **Broad Block** | **Total** |
| Gasoline (GRO) | 6 | 25 | 31 |
| Diesel (DRO-HRO) | 6 | 26 | 32 |
| PAHs | 1 | 0 | 1 |
| VOCs | 6 | 25 | 31 |
| Metals | 6 | 16 | 22 |

Note: The number of samples analyzed excludes duplicate samples.

## 5.1 Soil Sampling and Analytical Results

Hart Crowser collected and field-screened soil samples approximately every 2.5 to 5 feet from most explorations using a photoionization detector (PID) to detect VOCs in the headspace, sheen testing, and visual and olfactory observations. Field screening results are presented in presented on the exploration logs in Appendix A and summarized in tables in Appendix E.

Soil samples were selected for chemical analysis from explorations based on field screening results, soil descriptions, and proximity to the water table. Detected concentrations of TPH and cVOCs in soil are presented in Table 9 and detected concentrations of metals in soil are presented in Table 10. For reference purposes, historical soil data is summarized in Table 11.

### *5.1.1 615 Dexter*

A total of 45 soil samples collected from 615 Dexter were submitted for chemical analysis. The distribution of chemical analysis of soil samples from 615 Dexter is summarized in Table 8. Detected concentrations of TPHs, cVOCs, and metals in soil from 615 Dexter are presented in Figures 19, 20, and 21, respectively. The concentrations of TPH and cVOCs from 615 Dexter are also illustrated on subsurface cross sections (Figures 24 through 27).

Soil samples collected from ten 615 Dexter explorations (DGW-1 through DGW-4 and DPP-1 through DPP-6) did not have concentrations of any constituents at or above laboratory reporting limits.

Only one soil sample (from boring DMW-1S) had a concentration (1,200 milligrams per kilogram [mg/kg]) of GRO exceeding the MTCA cleanup level applicable to samples without benzene present (100 mg/kg). DRO and HRO were not detected at or above laboratory reporting limits in any of the soil samples analyzed from 615 Dexter.

No concentrations of cVOCs were detected at or above laboratory reporting limits in any of the soil samples analyzed from 615 Dexter.

No soil samples from 615 Dexter had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Detectable concentrations of barium, chromium, and/or lead were found in soil samples from all explorations, but all detected concentrations of metals were below applicable MTCA cleanup levels.

### *5.1.2 Broad Block*

A total of 159 soil samples collected from Broad Block were submitted for chemical analysis. The distribution of chemical analysis of soil samples from Broad Block is summarized in Table 8. Detected concentrations of TPH, cVOCs, and metals in soil from Broad Block are presented in Figures 26 through 30. The concentrations of TPH and cVOCs from Broad Block are also illustrated on subsurface cross sections (Figures 31 through 40).

Soil samples collected from 20 Broad Block explorations (HMW-3IA, MBGW-1, MBGW-2, MBGW-4, MBGW-6 through MBGW-12, MBGW-14, MBGW-16, and MBPP-1 through MBPP-7) did not have concentrations of any constituents at or above laboratory reporting limits.

Concentrations of petroleum-related VOCs (toluene, ethylbenzene, xylenes, isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, tert-butylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, isopropyltoluene, and/or n-butylbenzene) below applicable MTCA cleanup levels were found in soil samples from one boring (MBGW-13) from 7.5 to 20 feet bgs. One soil sample (from exploration MBGW-13 at 10 feet bgs) had a concentration of GRO (730 mg/kg) exceeding the MTCA cleanup level applicable to samples without benzene present (100 mg/kg). Concentrations of DRO and HRO below the applicable MTCA cleanup levels were found in one soil sample from exploration HMW-4IA at 7.5 feet bgs and exploration MBPP-8 at 15 feet bgs, respectively.

Concentrations of PCE, TCE, and/or cDCE at or above laboratory reporting limits were only found in four (4) soil samples below or at the water table from Broad Block: HMW-1IB at 50 feet bgs; HMW-2IB at 45 feet bgs; MBGW-3 at 26 feet bgs; and MBGW-5 at 45 feet bgs. The PCE concentrations in samples from HMW-1IB (0.120 mg/kg), MBGW-3 (0.074 mg/kg), MBGW-5 (3.4 mg/kg), and HMW-2IB (0.12 mg/kg) were above the MTCA cleanup level of 0.05 mg/kg. The TCE concentrations in samples from HMW-1IB (0.24 mg/kg) and MBGW-5 (0.47 mg/kg) were above the MTCA cleanup level of 0.03 mg/kg. All other cVOC detections on Broad Block were below the applicable MTCA cleanup levels.

No soil samples from Broad Block had concentrations of cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Only one soil sample had a detected concentration of arsenic (15 mg/kg), which was below the MTCA cleanup level of 20 mg/kg. Detectable concentrations of barium, chromium, and/or lead were found in soil samples from all explorations, but all detected concentrations of metals were below applicable MTCA cleanup levels.

## 5.2 Groundwater Sampling and Analytical Results

A total of 31 groundwater samples were submitted for chemical analysis: 20 grab groundwater samples from explorations and 11 groundwater samples from new monitoring wells (excluding duplicate samples). The distribution of chemical analysis of groundwater samples from MMB is summarized in Table 8. The analytical results for the groundwater samples are summarized in Tables 12 and 13. For reference the historical groundwater sampling results are presented in Table 14.

### *5.2.1 Grab Groundwater Sampling and Analysis*

Grab groundwater samples were collected from 5 explorations on 615 Dexter and 15 explorations on Broad Block. All grab groundwater samples were collected from the shallow groundwater zone. Selected samples were submitted for chemical analysis of petroleum hydrocarbons, total and dissolved metals (RCRA), and VOCs.

#### 5.2.1.1 615 Dexter

Grab groundwater samples were collected from 5 explorations on 615 Dexter. The results are summarized in Tables 12 and 13. Detected concentrations of TPH, cVOCs, and dissolved metals in groundwater from

615 Dexter are presented in Figures 41, 42, and 43, respectively. The concentrations of TPH and cVOCs from 615 Dexter are also illustrated on subsurface cross sections (Figures 22 through 25).

GRO, ethylbenzene, xylenes, and other petroleum-related VOCs were detected in one grab groundwater sample on 615 Dexter (from boring DGW-1) at concentrations below applicable MTCA cleanup levels.

GRO and VOCs were not detected at or above laboratory reporting limits in the remaining grab groundwater samples collected and analyzed from 615 Dexter (from explorations DGW-2, DGW-3, DGW-4, and DPP-3). DRO and HRO were not detected at or above laboratory reporting limits in any of the grab groundwater samples collected and analyzed from 615 Dexter.

No grab groundwater samples had concentrations of dissolved cadmium, chromium, lead, mercury, selenium, or silver at or above laboratory reporting limits. Dissolved arsenic was detected in one grab groundwater sample collected from DGW-1 at a concentration of 3.1 micrograms per liter (µg/L), below the MTCA cleanup level of 5 µg/L. Dissolved barium was detected in two grab groundwater samples collected from DGW-3 and DGW-4 at concentrations ranging from 27 to 55 µg/L, below the MCL of 2,000 µg/L.

#### 5.2.1.2 Broad Block

Grab groundwater samples were collected from 15 explorations on Broad Block. The results are summarized in Tables 12 and 13. Detected concentrations of TPH in grab groundwater from Broad Block are presented in Figures 44 through 46. Detected concentrations of cVOCs in grab groundwater from Broad Block are presented in Figures 47 through 49. Detected concentrations of dissolved metals in grab groundwater from Broad Block are presented on Figure 50. The concentrations of TPH and cVOCs from Broad Block are also illustrated on subsurface cross sections (Figures 31 through 40).

GRO, DRO, and HRO were not detected at or above laboratory reporting limits in any of the grab groundwater samples analyzed from Broad Block. VOCs were not detected at or above laboratory reporting limits in grab groundwater samples analyzed from explorations MBGW-2, MBGW-7 through MBGW-11, MBGW-13, and MBGW-16.

PCE was detected at or above laboratory reporting limits in grab groundwater samples collected from explorations MBGW-1, MBGW-3, MBGW-6, MBGW-12, MBGW-15, and MBPP-5 at concentrations ranging from 2.9 to 35 µg/L. The concentrations of PCE in explorations MBGW-3 (35 µg/L), MBGW-1 (9.5 µg/L), MBGW-12 (5.1 µg/L), and MBGW-15 (35 µg/L) exceed the MTCA cleanup level of 5 µg/L. TCE was detected at or above laboratory reporting limits in grab groundwater samples collected from explorations MBGW-1, MBGW-3, MBGW-6, and MBGW-12 at concentrations ranging from 1.0 to 7.4 µg/L. The concentration of TCE in exploration MBGW-3 (7.4 µg/L) exceeds the MTCA cleanup level of 5 µg/L. cDCE was detected at or above laboratory reporting limits in grab groundwater samples collected from explorations MBGW-1, MBGW-3, MBGW-5, and MBGW-6 with concentrations ranging from 1.0 to 19 µg/L. Only one sample (from MBGW-1) had a cDCE concentration exceeding the MTCA cleanup level of 16 µg/L.

No grab groundwater samples had concentrations of dissolved cadmium, chromium, lead, mercury, selenium, or silver at or above laboratory reporting limits. Dissolved arsenic was detected in two grab

groundwater samples, one of which (from exploration MBGW-11) had a concentration of 6.9 µg/L, exceeding the MTCA cleanup level of 5 µg/L. Dissolved barium was detected in nine grab groundwater samples collected from MBGW-2, MBGW-7, MBGW-8, MBGW-10, MBGW-11, MBGW-14, MBGW-15, MBGW-16, and MBPP-5 at concentrations ranging from 25 to 95 µg/L, all below the MCL of 2,000 µg/L.

### *5.2.2 Monitoring Well Groundwater Sampling and Analysis*

Groundwater samples were collected from the 11 new monitoring wells (one on 615 Dexter and ten on Broad Block) to evaluate water quality using low-flow sampling techniques on March 19 to 21, 2019. Samples were submitted for chemical analysis of petroleum hydrocarbons, total metals (RCRA 8), PAHs, and/or VOCs.

The analytical results for the groundwater samples collected from monitoring wells are summarized in Tables 12 and 13. The field water quality parameters pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen, and turbidity were monitored during groundwater sampling of the monitoring wells and are summarized in Table 15.

#### 5.2.2.1 615 Dexter

A groundwater sample was collected in March 2019 from the one monitoring well (DMW-1S) completed on 615 Dexter. Detected concentrations of TPH, cVOCs, and total metals in DMW-1S are shown on Figures 41, 42, and 43, respectively.

GRO was detected at a concentration of 0.35 milligrams per liter (mg/L), which is below the MTCA cleanup level of 0.8 mg/L applicable to samples with benzene present. DRO and HRO were not detected at or above laboratory reporting limits in this sample.

cVOCs were not detected at or above laboratory reporting limits in this sample. Low levels of petroleum-related VOCs (benzene and isopropyltoluene) were detected at concentrations below applicable MTCA cleanup levels.

Total cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in this sample. Total arsenic was detected at 8.1 µg/L, exceeding the MTCA cleanup level of 5 µg/L, and total barium was detected at 38 µg/L, below the MCL of 2,000 µg/L.

#### 5.2.2.2 Broad Block

Groundwater samples from ten new monitoring wells were collected and submitted for chemical analysis. Detected concentrations of TPH for shallow, intermediate, and deep wells on Broad Block are shown on Figures 44, 45, and 46, respectively. Detected concentrations of cVOCs for shallow, intermediate, and deep wells on Broad Block are shown on Figures 47, 48, and 49, respectively.

GRO, DRO, and HRO were not detected at or above laboratory reporting limits in any of the groundwater samples from monitoring wells on Broad Block.

PCE was detected in groundwater samples collected from HMW-1D, HMW-1IB, and HMW-2IA at concentrations ranging from 3.4 to 240 µg/L. The concentrations of PCE in monitoring wells HMW-2IA (240

µg/L) and HMW-1IB (20 µg/L) exceed the MTCA cleanup level of 5 µg/L for groundwater. TCE was detected in groundwater samples collected from HMW-1D, HMW-1IB, and HMW-2IA at concentrations ranging from 6.7 to 74 µg/L, which all exceed the MTCA cleanup level of 5 µg/L. cDCE was detected in the groundwater samples from HMW-1D, HMW-1IB, and HMW-2IA with concentrations ranging from 22 to 410 µg/L, which all exceed the MTCA cleanup level of 16 µg/L.

Total cadmium, chromium, mercury, selenium, and silver were not detected at or above laboratory reporting limits in the one groundwater sample collected from a monitoring well and analyzed for metals on Broad Block (HMW-1S). Total arsenic was detected at 14 µg/L, exceeding the MTCA Method A cleanup level of 5 µg/L. Total barium and total lead were detected at concentrations (83 µg/L and 2.7 µg/L, respectively) below the applicable MTCA cleanup levels.

## 5.3 AOC Specific Results

A summary of the results of soil and groundwater findings in each of the nine identified AOCs is provided below.

### *5.3.1 AOC 1 – 615 Dexter*

AOC 1 represents potential soil and groundwater contamination that may be present due to historical activities at 615 Dexter. Eleven explorations were advanced (DPP-1 through DPP-6, DGW-1 through DGW-4, and DMW-1S), one of which was completed as a monitoring well (DMW-1S). Forty-seven soil and six groundwater samples (from DPP-3, DGW-1 through DGW-4, and DMW-1S) were collected and analyzed for TPH, cVOCs, and/or metals .

The soil samples collected from explorations DGW-1 through DGW-4 and DPP-1 through DPP-6 did not have any concentrations of TPH at or above laboratory reporting limits. Soil samples from 10 to 15 feet bgs in boring DMW-1S had concentrations of GRO and/or petroleum-related VOCs. Ethylbenzene (0.053 mg/kg), xylenes (0.071 mg/kg), n-propylbenzene (0.11 mg/kg), 1,3,5-trimethylbenzene (0.19 mg/kg), 1,2,4-trimethylbenzene (0.51 mg/kg), sec-butylbenzene (0.071 mg/kg), isopropyltoluene (0.12 mg/kg), and n-butylbenzene (0.18 mg/kg) were detected in the soil sample from 10 feet bgs. The concentrations of petroleum-related VOCs are well below the applicable MTCA cleanup levels.

The soil sample from 12.5 feet bgs in boring DMW-1S had the highest concentrations of GRO and VOCs in this AOC, with GRO (1,200 mg/kg), ethylbenzene (2.1 mg/kg), xylenes (4.4 mg/kg), isopropylbenzene (1.5 mg/kg), n-propylbenzene (3.2 mg/kg), 1,3,5-trimethylbenzene (6.2 mg/kg), tert-Butylbenzene (0.105 mg/kg), 1,2,4-trimethylbenzene (13 mg/kg), sec-butylbenzene (1.9 mg/kg), isopropyltoluene (3.2 mg/kg), and n-butylbenzene (0.82 mg/kg) detected. Additionally, GRO (67 mg/kg), ethylbenzene (0.12 mg/kg), xylenes (0.20 mg/kg), isopropylbenzene (0.12 mg/kg), n-propylbenzene (0.28 mg/kg), 1,3,5-trimethylbenzene (0.76 mg/kg), 1,2,4-trimethylbenzene (1.9 mg/kg), sec-butylbenzene (0.25 mg/kg), isopropyltoluene (0.48 mg/kg), and n-butylbenzene (0.58 mg/kg) were detected in the soil sample from 15 feet bgs.

No soil samples had concentrations of cVOCs at or above laboratory reporting limits.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected (27 mg/kg) in one soil sample from DGW-4 at 15 feet bgs. Barium (ranging from 28 to 89 mg/kg) and chromium (ranging from 22 to 67 mg/kg) were detected in all soil samples analyzed from all explorations and at depths ranging from 2.5 to 35 feet bgs, with the highest concentrations from DGW-4 at 35 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

In groundwater samples, GRO was detected in DGW-1 at 0.34 mg/L and in DMW-1S at 0.30 mg/L, both below the MTCA cleanup level of 0.8 mg/L applicable to samples with benzene present. Petroleum-related VOCs were also detected in the groundwater samples from DGW-1 and DMW-1S, all at concentrations below applicable MTCA cleanup levels. Ethylbenzene (8.0 µg/L), xylenes (14 µg/L), isopropylbenzene, (2.6 µg/L), n-propylbenzene (3.7 µg/L), 1,3,5-trimethylbenzene (6.5 µg/L ), 1,2,4-trimethylbenzene (12 µg/L), sec-butylbenzene 1.2 µg/L, isopropyltoluene (1.7 µg/L), and 1,2,4-trichlorobenzene (1.5 µg/L) were detected in the grab groundwater sample from DGW-1. Benzene (1.5 µg/L) and isopropyltoluene (1.5 µg/L) were detected in the groundwater sample from monitoring well DMW-1S. GRO, HRO, and PAHs were not detected at or above laboratory reporting limits in any of the groundwater samples.

No groundwater samples had concentrations of cVOCs at or above laboratory reporting limits.

No grab groundwater samples had concentrations of dissolved metals at or above laboratory reporting limits, except for arsenic (3.1 µg/L) in DGW-1, barium (55 µg/L) in DGW-3, and barium (27 µg/L) in DGW-4, all of which are below the applicable MTCA cleanup level of 5 µg/L for arsenic and the MCL of 2,000 µg/L for barium.

The detected chemicals of concern appear to be confined to the area of a former service station which was reportedly located in the southeastern portion of 615 Dexter. The chemicals present are related to gasoline-range petroleum hydrocarbons. There is no evidence from the soil and groundwater sampling and analysis conducted on 615 Dexter of the presence of chlorinated solvents that could have migrated onto 615 Dexter from the American Linen Site and/or the former solvent tank reportedly located in the alley south of 615 Dexter.

The full extent of gasoline-related soil and groundwater contamination has not yet been fully defined but appears to be isolated in the southeast portion of 615 Dexter. Because of the nature of gasoline contamination, we expect the extent of gasoline-related contamination to be limited both laterally and vertically.

### *5.3.2 AOC 2 – Former Northwest Gas Station*

AOC 2 represents potential soil and groundwater contamination that may be present due to a gas station which operated on Broad Block prior to the 1960s. Five explorations were advanced (MBGW-6, MBGW-12, MBGW-13, HMW-3IA, and HMW-3D), two of which were completed as monitoring wells (HMW-3IA and HMW-3D). Eighteen soil samples and five groundwater samples were collected and analyzed for TPH, cVOCs, and/or metals analysis.

The soil samples collected from explorations MBGW-6, MBGW-12, and HMW-3IA did not have any concentrations of TPH at or above laboratory reporting limits. GRO and petroleum-related VOCs were detected in soil samples from MBGW-13, with the highest concentrations occurring at 10 feet bgs. GRO was detected in two soil samples from MBGW-13: the sample from 10 feet bgs had a concentration (730 mg/kg) exceeding the MTCA Method A cleanup level of 100 mg/kg (applicable to soil samples without benzene present) and the sample from 20 feet bgs had a concentration (16 mg/kg) below the MTCA Method A cleanup level. All the detected concentrations for petroleum-related VOCs were below applicable MTCA cleanup levels.

cVOCs were not detected at or above laboratory reporting limits in any soil samples from AOC 2.

No soil samples had concentrations of arsenic, cadmium, lead, mercury, selenium, or silver at or above laboratory reporting limits. Barium (ranging from 32 to 56 mg/kg) and chromium (ranging from 21 to 42 mg/kg) were detected in all three soil samples analyzed for metals (from borings MBGW-6, MBGW-12, and HMW-3IA), at depths ranging from 5 to 22.5 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

GRO, DRO, and HRO were not detected at or above laboratory reporting limits in any of the groundwater samples collected from AOC 2. Petroleum-related VOCs were not detected at or above laboratory reporting limits in any of the groundwater samples collected from AOC 2, except for toluene in HMW-3D at a concentration (1.1 µg/L) well below the MTCA Method A cleanup level of 1,000 µg/L.

The following cVOCs were detected at or above laboratory reporting limits: cDCE (1.0 µg/L), TCE (1.1 µg/L), and PCE (4.3 µg/L) in MBGW-6 and TCE (1.0 µg/L) and PCE (5.1 µg/L) in MBGW-12. All the detected concentrations of cVOCs were below applicable MTCA cleanup levels, with the exception of PCE in MBGW-12 (5.1 µg/L), which is just above the MTCA Method A cleanup level of 5 µg/L.

Dissolved metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were not detected at or above laboratory reporting limits in the grab groundwater samples collected from AOC 2 (from explorations MBGW-6 and MBGW-13), except arsenic was detected at a concentration (3.3 µg/L) below the MTCA Method A cleanup level of 5 µg/L.

The contaminant of concern (i.e., analyte with concentrations exceeding applicable MTCA cleanup levels) in soil appears to be related to the former gasoline station that was active at Broad Block prior to the 1960s. GRO was the only contaminant of concern in soil. GRO was not detected at or above laboratory reporting limits in shallow groundwater, suggesting that contamination is limited to shallow soil. The full extent of soil contamination has not yet been fully defined but appears to be restricted to a small portion of Broad Block. Because of the nature of gasoline contamination, we expect the extent of gasoline-related contamination to be limited both laterally and vertically.

Detected chlorinated solvent concentrations in groundwater on AOC 2 are, based on available information and research, related to the American Linen Site and not related to prior activities or operations on Broad Block.

### 5.3.3 AOC 3 – Former Soap and Chemical Manufacturing Facility

AOC 3 represents potential contamination due to historical operations of the former building, which was used as a soap and chemical manufacturing facility from approximately 1925 to 1955. Three explorations were advanced (MBGW-3, MBGW-4, and MBPP-5), from which 17 soil samples and two groundwater samples (from MBGW-3 and MBPP-5) were collected and analyzed for TPH, cVOCs, and/or metals analysis.

No soil samples had concentrations of TPH at or above laboratory reporting limits.

No soil samples had concentrations of cVOCs exceeding applicable MTCA cleanup levels with the exception of one sample at 26 feet bgs in MBGW-3. This sample had a concentration of PCE of 0.074 mg/kg, exceeding the MTCA Method A cleanup level of 0.05 mg/kg.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected in only one soil sample (from boring MBGW-4 at 5 feet bgs) at a concentration (12 mg/kg) well below the MTCA Method A cleanup level of 250 mg/kg. Barium (ranging from 42 to 65 mg/kg) and chromium (ranging from 22 to 40 mg/kg) were detected in all eight soil samples analyzed for metals, at depths ranging from 2.5 to 25 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

TPH was not detected at or above laboratory reporting limits in either of the groundwater samples.

PCE (35 µg/L), TCE (7.4 µg/L), and cDCE (4.8 µg/L) were detected in the grab groundwater sample from MBGW-3; the PCE and TCE concentrations exceeded the applicable MTCA Method A cleanup levels (5 µg/L). PCE (2.9 µg/L) was detected in the groundwater sample from MBPP-5 at a concentration below the MTCA Method A cleanup level.

Dissolved arsenic, cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in either of the groundwater samples. Dissolved barium was only detected in one groundwater sample (from MBPP-5) at a concentration (26 µg/L) well below the MCL of 2,000 µg/L.

No concentrations of TPH or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 3. Detected chlorinated solvent concentrations in soil and groundwater on AOC 3 are, based on available information and research, related to the American Linen Site and not related to prior activities or operations on Broad Block.

### 5.3.4 AOC 4 – Former Auto Wrecking Area and Storage Area

AOC 4 represents potential contamination due to auto wrecking and vehicle storage activities prior to the 1960s. Nine explorations were advanced (MBPP-1, MBPP-2, MBGW-1, MBGW-2, MBGW-14, MBGW-15, HMW-1S, HMW-1IB, and HMW-1D), three of which were completed as monitoring wells (HMW-1S, HMW-1IB, and HMW-1D). Twenty-seven soil samples and seven groundwater samples (from MBGW-1, MBGW-2, MBGW-14, MBGW-15, HMW-1S, HMW-1IB, and HMW-1D) were collected and analyzed for TPH, cVOCs, and/or metals analysis.

No soil samples had concentrations of TPH at or above laboratory reporting limits.

Two cVOCs were detected in one soil sample from below the water table (HMW-1IB at 50 feet bgs) - PCE at 0.12 mg/kg and TCE at 0.24 mg/kg, which exceed applicable MTCA cleanup levels.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected in five soil samples at concentrations ranging from 8.5 to 93 mg/kg, well below the MTCA Method A cleanup level of 250 mg/kg. Barium (ranging from 45 to 170 mg/kg) and chromium (ranging from 18 to 46 mg/kg) were detected in all eight soil samples analyzed for metals, at depths ranging from 5 to 30 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

TPH was not detected at or above laboratory reporting limits in any of the groundwater samples.

cVOCs were not detected at or above laboratory reporting limits in groundwater samples from HMW-1S or MBGW-2. PCE (3.4 µg/L), TCE (27 µg/L), cDCE (410 µg/L), VC (4.0 µg/L), and tDCE (1.2 µg/L) were detected in the groundwater sample from HMW-1D; the TCE, cDCE, and VC concentrations exceeded the applicable MTCA cleanup levels. PCE (20 µg/L), TCE (6.7 µg/L), and cDCE (22 µg/L) were detected in the groundwater sample from HMW-1IB, all at concentrations exceeding the applicable MTCA cleanup levels. PCE (9.5 µg/L), TCE (3.9 µg/L), and cDCE (19 µg/L) were detected in the grab groundwater sample from MBGW-1; the PCE and cDCE concentrations exceeded the applicable MTCA cleanup levels. PCE (35 µg/L) was detected in the grab groundwater sample from MBGW-15 at a concentration exceeding the MTCA Method A cleanup level.

Dissolved arsenic, cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in any of the grab groundwater samples. Dissolved barium was detected in three grab groundwater samples (from MBGW-2, MBGW-14, and MBGW-15) at concentrations ranging from 40 to 95 µg/L, all of which are well below the MCL of 2,000 µg/L. One groundwater sample from a monitoring well was collected and analyzed for total metals (HMW-1S), which had detected concentrations of total arsenic (14 µg/L), barium (83 µg/L), and lead (2.7 µg/L). The barium and lead concentrations are well below the applicable MTCA cleanup levels, though the arsenic concentration exceeded the MTCA Method A cleanup level of 5 µg/L.

No concentrations of TPH or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 4 except for one groundwater sample from monitoring well HMW-1S with a concentration of total arsenic slightly exceeding the MTCA Method A cleanup level. Detected chlorinated solvent concentrations in groundwater on AOC 4 are, based on available information and research, related to the American Linen Site and not related to prior activities or operations on Broad Block.

### *5.3.5 AOC 5 – Former Refrigerator Service/UST*

AOC 5 represents potential contamination due to historical operations of the former building. Prior to the 1960s, this area was used for a refrigerator service business, and a former UST reportedly existed in this area. Three explorations were advanced (MBPP-3, MBPP-4, and MGBW-8). Twelve soil samples and one

groundwater samples (from MBGW-8) were collected and analyzed for TPH, cVOCs, and/or metals analysis.

No soil samples had concentrations of TPH at or above laboratory reporting limits.

No soil samples had concentrations of cVOCs at or above laboratory reporting limits.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected in only one sample (from boring MBPP-4 at 10 feet bgs) at a concentration (5.6 mg/kg) well below the MTCA Method A cleanup level of 250 mg/kg. Barium (ranging from 35 to 48 mg/kg) and chromium (ranging from 26 to 36 mg/kg) were detected in all three soil samples analyzed for metals, at depths ranging from 10 to 25 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

TPH was not detected at or above laboratory reporting limits in the grab groundwater sample analyzed (from boring MBGW-8).

cVOCs were not detected at or above laboratory reporting limits in the grab groundwater sample analyzed (from boring MBGW-8).

Dissolved arsenic, cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in the one grab groundwater sample analyzed for metals (from boring MBGW-8). Dissolved barium was detected at a concentration (45 µg/L) well below the MCL of 2,000 µg/L.

No concentrations of TPH, cVOCs, or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 5. No additional environmental sampling is recommended for AOC 5.

### *5.3.6 AOC 6 – Former Southwest Gas Station*

AOC 6 represents potential contamination due to a former service station. Four explorations were advanced (MBGW-9, MBGW-10, MBGW-11, and MBGW-16). Sixteen soil samples and four groundwater samples were collected and analyzed for TPH, cVOCs, and/or metals analysis.

No soil samples had concentrations of TPH at or above laboratory reporting limits.

No soil samples had concentrations of cVOCs at or above laboratory reporting limits.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected in only one soil sample (from MBGW-11 at 5 feet bgs) at a concentration (10 mg/kg) well below the MTCA Method A cleanup level of 250 mg/kg. Barium (ranging from 43 to 68 mg/kg) and chromium (ranging from 38 to 44 mg/kg) were detected in all three soil samples analyzed for metals, at depths ranging from 5 to 10 feet bgs. All the detected concentrations for metals were below applicable MTCA cleanup levels.

TPH was not detected at or above laboratory reporting limits in any of the grab groundwater samples analyzed.

cVOCs were not detected at or above laboratory reporting limits in any of the grab groundwater samples analyzed.

Dissolved cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in any of the grab groundwater samples. Dissolved barium was detected in three grab groundwater samples (from MBGW-10, MBGW-11, and MBGW-16) at concentrations ranging from 25 to 32 µg/L, all of which are well below the MCL of 2,000 µg/L. Dissolved arsenic was detected in one grab groundwater sample (from MBGW-11) at a concentration of 6.9 µg/L, slightly exceeding the MTCA Method A cleanup level (5 µg/L).

No concentrations of TPH, cVOCs, or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 6 except for one grab groundwater sample from MBGW-11 with a concentration of dissolved arsenic slightly exceeding the MTCA Method A cleanup level.

### *5.3.7 AOC 7 – Downgradient of 601 Dexter Avenue North Property*

AOC 7 represents potential groundwater contamination that may have migrated from the 601 Dexter Avenue North property onto Broad Block. Two explorations were advanced (HMW-4IA and MBPP-8), one of which was completed as a monitoring well (HMW-4IA). Eight soil samples and one groundwater sample (from HMW-4IA) were collected and analyzed for TPH, cVOCs, and/or metals analysis.

DRO was detected in only one soil sample (from HMW-4IA at 7.5 feet bgs) at a concentration (160 mg/kg) well below the MTCA Method A cleanup level of 2,000 mg/kg. HRO was detected in only one soil sample (from MBPP-8 at 15 feet bgs) at a concentration (150 mg/kg) well below the MTCA Method A cleanup level of 2,000 mg/kg. One soil sample (from HMW-4IA at 7.5 feet bgs) was analyzed for PAHs, which had a total carcinogenic concentration based on toxicity equivalency factors (0.29 micrograms per kilogram [µg/kg]) exceeding the MTCA Method A cleanup level of 0.1 µg/kg. No soil samples had concentrations of petroleum-related VOCs at or above laboratory reporting limits.

No soil samples had concentrations of cVOCs at or above laboratory reporting limits.

No soil samples had concentrations of cadmium, mercury, selenium, or silver at or above laboratory reporting limits. One soil sample (from MBPP-8 at 15 feet bgs) was analyzed for metals, which had arsenic (16 mg/kg), barium (80 mg/kg), chromium (30 mg/kg), and lead (16 mg/kg) detected at concentrations below applicable MTCA cleanup levels.

TPH were not detected at or above laboratory reporting limits in the groundwater sample analyzed (from HMW-4IA).

VC was the only cVOC detected at or above laboratory reporting limits, which had a concentration (3.6 µg/L) exceeding the MTCA Method A cleanup level (0.2 µg/L).

The groundwater sample was not analyzed for total or dissolved metals.

No concentrations of TPH or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 7 except for one soil sample from HMW-4IA with a concentration of total carcinogenic PAHs slightly exceeding the MTCA Method A cleanup level. Much of the soil in the area was formerly excavated to depths of 20 feet to allow Broad Street to pass under Dexter Avenue North and Mercer Street. The groundwater sample from HMW-4IA had a VC concentration exceeding the MTCA Method A cleanup level. There is no evidence for an on-site source of chlorinated solvents in AOC 7, suggesting that the VC contamination may have migrated from another source area—most likely the American Linen Site.

### *5.3.8 AOC 8 – Central Area of Broad Block*

AOC 8 represents the central portion of Broad Block which includes the former alignment of Broad Street, and which overlays areas of the groundwater plume originating from the American Linen Site. Four explorations were advanced (MBGW-5, MBGW-7, MBPP-6, and MBPP-7). Twenty soil samples and two groundwater samples (from MBGW-5 and MBGW-7) were collected and analyzed for TPH, cVOCs, and/or metals analysis.

No soil samples had concentrations of TPH at or above laboratory reporting limits.

Three cVOCs were detected in only one soil sample (from MBGW-5 at 45 feet bgs): PCE at 3.4 mg/kg, TCE at 0.47 mg/kg, and cDCE at 0.26 mg/kg, which all exceed applicable MTCA cleanup levels.

No soil samples had concentrations of arsenic, cadmium, mercury, selenium, or silver at or above laboratory reporting limits. Lead was detected in only one soil sample (from MBPP-7 at 5 feet bgs) at a concentration (6.6 mg/kg) well below the MTCA Method A cleanup level of 250 mg/kg. Barium (ranging from 33 to 200 mg/kg) and chromium (ranging from 21 to 38 mg/kg) were detected in all five soil samples analyzed for metals, at depths ranging from 5 to 40 feet. All the detected concentrations for metals were below applicable MTCA cleanup levels.

TPH was not detected at or above laboratory reporting limits in either of the grab groundwater samples analyzed (from MBGW-5 and MBGW-7).

cDCE was the only cVOC detected at or above laboratory reporting limits (from MBGW-5), which had a concentration (2.1 µg/L) below the MTCA cleanup level (16 µg/L).

Dissolved arsenic, cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above laboratory reporting limits in either of the grab groundwater samples. Dissolved barium was detected in one grab groundwater sample (from MBGW-7) at a concentration (28 µg/L) well below the MCL of 2,000 µg/L.

No concentrations of TPH or metals exceeded applicable MTCA cleanup levels in soil and groundwater samples from AOC 8. Detected chlorinated solvent concentrations in soil and groundwater on AOC 8 are,

based on available information and research, related to the American Linen Site and not related to prior activities or operations on Broad Block.

### *5.3.9 AOC 9 – American Linen Site Groundwater Plume*

AOC 9 represents chlorinated solvent contamination that has migrated from the American Linen Site onto Broad Block. Previous sampling of historical wells on Broad Block (MW-106, MW-119, and FMW-129) by others indicated that PCE and related degradation products are present in groundwater at concentrations exceeding applicable MTCA cleanup levels. AOC 9 includes groundwater samples from 10 new monitoring wells and 15 grab groundwater samples collected from Broad Block for chemical analysis of VOCs. We also incorporated results of groundwater sampling from historical wells located on the northern portion of Broad Block.

PCE, TCE, cDCE, and/or VC were detected at or above laboratory reporting limits in 11 groundwater samples from shallow (5), intermediate (4), and deep zone (2) wells (Figures 47, 48, and 49). PCE was detected in nine groundwater samples at concentrations ranging from 2.9 to 240 µg/L; six groundwater samples had PCE concentrations exceeding the MTCA Method A cleanup level of 5 µg/L. TCE was detected in seven groundwater samples at concentrations ranging from 1 to 74 µg/L; four samples had TCE concentrations exceeding the MTCA Method A cleanup level of 5 µg/L. cDCE was detected in seven groundwater samples at concentrations ranging from 1 to 410 µg/L; four samples had cDCE concentrations exceeding the MTCA Method B cleanup level of 16 µg/L. VC was detected in three groundwater samples at concentration ranging from 1.2 to 4.0 µg/L, all of which exceeded the MTCA Method A cleanup level of 0.2 µg/L.

Chlorinated solvents (PCE, TCE, and cDCE) were detected in four soil samples below or at the water table from the northern half of Broad Block. PCE and related degradation products were also present in groundwater below Broad Block. Chlorinated solvents were not detected at or above laboratory reporting limits in the groundwater samples from the upgradient wells, HMW-3IA and HMW-3D.

The southern extent of the chlorinated solvent plume originating from the American Linen Site has not been defined on and beneath Broad Block because of the presence of chlorinated solvents detected in well HMW-2IA (PCE = 240 µg/L) and the grab groundwater sample from MBGW-15 (PCE = 35 µg/L). The absence of obvious on-site sources of chlorinated solvents, as well as available information and research, establishes that the detected VOCs in AOC 9 are from the American Linen Site and are not related to prior activities or operations on Broad Block.

# 6.0 FINDINGS

Based on the review of historical data and the results of this site investigation, we present the following preliminary findings. The major areas of soil and groundwater impacts are shown in Figures 51 and 52. The preliminary conclusions presented here will be revised as necessary as additional data (i.e., from the upcoming Data Gaps Investigation and from investigations being undertaken by others) become available.

## 6.1 615 Dexter

- Gasoline-range organics exceeding MTCA cleanup levels were found in groundwater and subsurface soil near the water table in explorations in the southeast corner of this parcel. These findings suggest the presence of a historical source in this vicinity. Soil and groundwater samples from elsewhere on and adjacent to 615 Dexter did not contain petroleum-related constituents exceeding applicable cleanup levels.

- No cVOCs exceeding MTCA cleanup standards were detected in soil or groundwater on 615 Dexter, suggesting that there are no on-site sources of chlorinated solvents and that groundwater beneath this parcel is not impacted by the chlorinated solvent plume originating on and from the American Linen Site.

- Arsenic in groundwater from one monitoring well in the southeast corner of 615 Dexter (DMW-1S) slightly exceeded the applicable MTCA cleanup level, suggesting that subsurface breakdown of the petroleum in this area may have mobilized naturally occurring arsenic in soil. Otherwise, no metals in soil or dissolved groundwater were detected above applicable MTCA cleanup levels.

## 6.2 Broad Block

- Gasoline-range organics exceeding the applicable MTCA cleanup level were detected in a single vadose-zone soil sample (10-feet bls) from boring MBGW-13 located in the northwest portion of Broad Block. There were detections of petroleum-related constituents in vadose-zone soil in scattered locations around Broad Block, but none exceeded relevant cleanup levels. There were no other detections of petroleum-related constituents in soil or groundwater on Broad Block.

- Chlorinated solvents—PCE and related degradation products—have migrated via groundwater from the American Linen Site, resulting in a widespread contaminant plume on Broad Block as evidenced by numerous cleanup level exceedances in groundwater and soil at or below the water table. The approximate boundaries of this cVOC plume, based on existing data, is depicted on Figure 52. Data results establish that there are no significant historical sources that contributed cVOCs to soil and groundwater on Broad Block.

- Groundwater impacted with vinyl chloride was detected in one well, HMW-4IA, which is located beyond the currently-defined limit of the American Linen groundwater contaminant plume. The source of vinyl chloride in this well has not yet been confirmed.

- With the following exceptions, metals in soil and groundwater at the property were below MTCA cleanup levels.

    - Lead slightly exceeding the MTCA cleanup level of 250 mg/kg was detected in one soil sample at a concentration of 279 mg/kg. This sample was from the 22-foot depth in a boring located along the eastern edge of Broad Block.

- Arsenic exceeding the MTCA cleanup level of 5 µg/L was detected in groundwater in two locations - a grab sample from boring MBGW-11 at 6.9 µg/L (dissolved) and a sample from monitoring well HMW-1S at 14 µg/L (total). (Note: For comparison of groundwater metals results to MTCA cleanup levels we used dissolved [filtered] results for grab groundwater samples collected from soil borings where excess turbidity was often an issue and total [unfiltered] results for monitoring well samples where excess turbidity was less of a problem.)

# 7.0 CONCLUSIONS

We recommend the following activities going forward:

- Conduct continuous water level monitoring in on-site wells to monitor the impact of ongoing construction at the American Linen property on water levels;
- Conduct additional aquifer testing to determine hydraulic conductivity of groundwater zone likely to be impact by construction activities; and
- Perform groundwater modeling to estimate the discharge volume and evaluate the potential impact on MMB groundwater and the American Linen Site plume from construction dewatering.

Additionally, the proposed explorations outlined in the Data Gaps Investigation Work Plan (being submitted along with this Site Investigation Summary Report) will address data gaps identified following this first phase of investigations and discussed previously. The new data will be used along with current data to prepare a Remedial Investigation (RI) report for submittal to Ecology.

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# 9.0 LIMITATIONS

Work for this project and report preparation was performed in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time that the work was performed. This report is for the specific application to the referenced project and for the exclusive use of 800 Mercer, LLC and 615 Dexter, LLC. No other warranty, express or implied, is made.

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## Table 3 - Monitoring Well and Boring Construction Details

| Well/Boring # | Exploration/ Well Type | AOC | Log? | Well Tag | Date Completed | Well Status | Easting | Northing | Depth | | Elevation | | Well Screen | | | | Well Diam. (in) | Drill Rig Type | Casing Depth (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Total (ft bgs) | Well (ft bgs) | Ground (ft) | TOC (ft) | Depth (ft) | | Elevation (ft) | | | | |
| | | | | | | | | | | | | | Top | Bottom | Top | Bottom | | | |
| 21417-GP1 | Shallow | 1 | Y | – | 4/21/2017 | B | – | – | 30 | 25 | – | – | 20 | 25 | NA | NA | 2 | PP | 25 |
| 21417-GP2 | Shallow | 1 | Y | – | 4/21/2017 | B | – | – | 19 | – | – | – | – | – | – | – | – | PP | – |
| 21417-GP3 | Shallow | 1 | Y | – | 4/21/2017 | B | – | – | 20 | 20 | – | – | 10 | 20 | NA | NA | 2 | PP | 20 |
| 21417-GP4 | Shallow | 1 | Y | – | 4/21/2017 | B | – | – | 15 | 15 | – | – | 10 | 15 | NA | NA | 2 | PP | 15 |
| 21417-GP5 | Shallow | 1 | Y | – | 5/19/2017 | B | – | – | 16 | – | – | – | – | – | – | – | – | PP | – |
| 21417-GP6 | Shallow | 1 | Y | – | 5/19/2017 | B | – | – | 20 | – | – | – | – | – | – | – | – | PP | – |
| 21417-GP7 | Shallow | 1 | Y | – | 5/19/2017 | B | – | – | 15 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB1 | Shallow | 2 | Y | – | 5/12/2017 | B | – | – | 10.2 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB2 | Shallow | 2 | Y | – | 5/12/2017 | B | – | – | 10 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB3 | Shallow | 6 | Y | – | 5/12/2017 | B | – | – | 29 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB4 | Shallow | 6 | Y | – | 5/12/2017 | B | – | – | 25 | 25 | – | – | 15 | 25 | NA | NA | 2 | PP | 25 |
| 21417-MB5 | Shallow | 8 | Y | – | 5/12/2017 | B | – | – | 10 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB6 | Shallow | 3 | Y | – | 5/11/2017 | B | – | – | 15 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB7 | Shallow | 5 | Y | – | 5/11/2017 | B | – | – | 12 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB8 | Shallow | 3 | Y | – | 5/11/2017 | B | – | – | 28 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB9 | Shallow | 4 | Y | – | 5/11/2017 | B | – | – | 25 | 25 | – | – | 15 | 25 | NA | NA | 2 | PP | 25 |
| 21417-MB10 | Shallow | 4 | Y | – | 5/11/2017 | B | – | – | 30 | – | – | – | – | – | – | – | – | PP | – |
| 21417-MB11 | Shallow | 4 | Y | – | 5/11/2017 | B | – | – | 25 | – | – | – | – | – | – | – | – | PP | – |
| B-211 | Deep | – | Y | – | 08/18/2017 | B | 1,268,426.80 | 231,900.70 | 122 | – | 39.75 | – | – | – | – | – | – | Sonic | – |
| B-212 | Deep | – | Y | – | 9/11/2017 | B | 1,268,349.91 | 231,945.06 | 100 | – | 57.61 | – | – | – | – | – | – | Sonic | – |
| B-213 | Deep | – | Y | – | 09/06/2017 | B | 1,268,347.25 | 231,893.53 | 125 | – | 57.42 | – | – | – | – | – | – | Sonic | – |
| B-214 | Deep | – | Y | – | 09/08/2017 | B | 1,268,344.84 | 231,831.15 | 120 | – | 57.42 | – | – | – | – | – | – | Sonic | – |
| B-215 | Deep | – | Y | – | 09/13/2017 | B | 1,268,432.65 | 231,782.45 | 95 | – | 53.95 | – | – | – | – | – | – | Sonic | – |
| B-217 | Deep | – | Y | – | 09/05/2017 | B | 1,268,385.94 | 231,843.51 | 115 | – | 51.80 | – | – | – | – | – | – | Sonic | – |
| B-310 | IA | 9 | Y | – | 04/03/1970 | B | – | – | 48.7 | – | 45.2 | – | – | – | – | – | – | – | – |
| B-311 | IA | 9 | Y | – | 04/08/1970 | B | – | – | 48.9 | – | 34.8 | – | – | – | – | – | – | – | – |
| B-323 | IA | 7 | Y | – | 04/17/1970 | B | – | – | 49.3 | – | 25.9 | – | – | – | – | – | – | – | – |
| B-324 | IA | – | Y | – | 04/25/1970 | B | – | – | 49.9 | – | 53.8 | – | – | – | – | – | – | – | – |
| B-402 | Deep | – | Y | – | 03/30/1970 | B | – | – | 99.4 | – | 19.3 | – | – | – | – | – | – | – | – |
| B-404 | IB | 4 | Y | – | 04/02/1970 | B | – | – | 68.4 | – | 28.6 | – | – | – | – | – | – | – | – |
| B-414 | IB | 4 | Y | – | 04/09/1970 | B | – | – | 62.4 | – | 27.7 | – | – | – | – | – | – | – | – |
| B-418 | Deep | – | Y | – | 04/15/1970 | B | – | – | 83.4 | – | 27.5 | – | – | – | – | – | – | – | – |
| B-419 | Deep | – | Y | – | 04/16/1970 | B | – | – | 93.5 | – | 19.3 | – | – | – | – | – | – | – | – |
| B-421 | IA | 9 | Y | – | 04/17/1970 | B | – | – | 53.8 | – | 27.7 | – | – | – | – | – | – | – | – |
| B-422 | Deep | – | Y | – | 04/20/1970 | B | – | – | 107.8 | – | 18.9 | – | – | – | – | – | – | – | – |
| B-423 | IB | – | Y | – | 04/21/1970 | B | – | – | 78.5 | – | 19.5 | – | – | – | – | – | – | – | – |
| B-426 | Deep | – | Y | – | 04/23/1970 | B | – | – | 98.5 | – | 18.7 | – | – | – | – | – | – | – | – |
| B-427 | Shallow | 3 | Y | – | 04/24/1970 | B | – | – | 28.5 | – | 29.3 | – | – | – | – | – | – | – | – |
| B-428 | IB | – | Y | – | 04/24/1970 | B | – | – | 78.5 | – | 19.2 | – | – | – | – | – | – | – | – |
| B-431 | Deep | – | Y | – | 04/28/1970 | B | – | – | 99 | – | 26.2 | – | – | – | – | – | – | – | – |
| B-432 | IB | – | Y | – | 04/28/1970 | B | – | – | 73.5 | – | 27.7 | – | – | – | – | – | – | – | – |
| B-434 | IB | 4 | Y | – | 04/30/1970 | B | – | – | 63 | – | 31.9 | – | – | – | – | – | – | – | – |
| B-435 | Deep | – | Y | – | 05/01/1970 | B | – | – | 99 | – | 22.5 | – | – | – | – | – | – | – | – |
| BB-5 | IB | – | Y | – | 09/03/1997 | D | – | – | 78 | 40 | 146 | – | 30 | 40 | – | – | 2 | HSA | 40 |
| BB-8 | IB | 9 | Y | – | 06/06/1997 | E | 1,268,705.38 | 231,762.42 | 78.5 | 40 | – | 43.69 | 30 | 40 | 13.69 | 3.69 | 2 | HSA | 40 |

## Table 3 - Monitoring Well and Boring Construction Details

| Well/Boring # | Exploration/ Well Type | AOC | Log? | Well Tag | Date Completed | Well Status | Easting | Northing | Depth | | Elevation | | Well Screen | | | | Well Diam. (in) | Drill Rig Type | Casing Depth (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Total (ft bgs) | Well (ft bgs) | Ground (ft) | TOC (ft) | Depth (ft) | | Elevation (ft) | | | | |
| | | | | | | | | | | | | | Top | Bottom | Top | Bottom | | | |
| BB-10 | IB | – | Y | – | 08/29/1997 | D | – | – | 60.5 | 39 | 153 | – | 29 | 39 | – | – | 2 | HSA | 39 |
| BB-13 | IB | – | Y | – | 03/19/1998 | D | – | – | 71.5 | 45 | 125 | – | 35 | 45 | – | – | 2 | HSA | 45 |
| CHB-09 | – | 4 | N | – | – | B | – | – | – | – | – | – | – | – | – | – | – | – | – |
| DGW-1 | Shallow | 1 | Y | – | 03/06/2019 | – | – | – | 31.5 | – | 47 | – | – | – | – | – | – | HSA | – |
| DGW-2 | Shallow | 1 | Y | – | 03/07/2019 | – | – | – | 31.5 | – | 59 | – | – | – | – | – | – | HSA | – |
| DGW-3 | IA | 1 | Y | – | 03/06/2019 | – | – | – | 45 | – | 47 | – | – | – | – | – | – | HSA | – |
| DGW-4 | IA | 1 | Y | – | 03/04/2019 | – | – | – | 51.5 | – | 65 | – | – | – | – | – | – | HSA | – |
| DMW-1S | Shallow | 1 | Y | – | 03/05/2019 | – | 1268247.245 | 231651.6982 | 31 | 30 | 56.06 | 55.76 | 20 | 30 | 36 | 26 | 2 | HSA | 31 |
| DPP-1 | Shallow | 1 | Y | – | 03/04/2019 | B | – | – | 20 | – | 59.5 | – | – | – | – | – | – | PP | – |
| DPP-2 | Shallow | 1 | Y | – | 03/04/2019 | B | – | – | 10 | – | 59 | – | – | – | – | – | – | PP | – |
| DPP-3 | Shallow | 1 | Y | – | 03/05/2019 | B | – | – | 30.5 | – | 47 | – | – | – | – | – | – | HSA | – |
| DPP-4 | Shallow | 1 | Y | – | 03/04/2019 | B | – | – | 22.5 | – | – | – | – | – | – | – | – | PP | – |
| DPP-5 | Shallow | 1 | Y | – | 03/04/2019 | B | – | – | 20 | – | 59 | – | – | – | – | – | – | PP | – |
| DPP-6 | Shallow | 1 | Y | – | 03/05/2019 | B | – | – | 19.5 | – | 47 | – | – | – | – | – | – | PP | – |
| FMW-129 | Deep | 4 | Y | BIE 085 | 05/16/2014 | E | 1,268,873.71 | 231,707.21 | 119 | 89.2 | 38.64 | 38.31 | 84.2 | 89.2 | -45.56 | -50.56 | 2 | HSA | – |
| FMW-131 | IB | – | Y | – | 08/30/2016 | E | 1,269,436.35 | 231,629.37 | 75.0 | 74.85 | – | 27.85 | 62.5 | 72.5 | -34.65 | -44.65 | 2 | HSA | – |
| FMW-3D | IB | – | Y | – | 03/08/2016 | – | 1,269,941.28 | 231,737.65 | 71.5 | 69 | – | 27.88 | 59 | 69 | -31.12 | -41.12 | 2 | HSA | – |
| GEI-1 | Deep | – | Y | BIJ 461 | 04/16/2014 | E | 1,269,362.77 | 231,828.18 | 81.5 | 26.8 | 28.35 | 27.95 | 26.8 | 36.8 | 1.15 | -8.85 | 2 | HSA | – |
| GEI-2 | Deep | – | Y | BIJ 462 | 04/17/2014 | E | 1,269,358.70 | 231,666.08 | 81.5 | 60.5 | 29.6 | 29.38 | 50.5 | 60.5 | -21.12 | -31.12 | 2 | HSA | – |
| GEI-MW-1 | IB | – | Y | BIJ 490 | 08/22/2014 | E | – | – | 61.5 | 59.9 | 30.5 | 30.10 | 39.8 | 59.8 | -9.70 | -29.70 | 2 | HSA | – |
| GEI-MW-2 | IB | – | Y | BIJ 492 | 08/23/2014 | E | – | – | 60 | 37.1 | 31.6 | 31.00 | 27.0 | 37.0 | 4.00 | -6.00 | 2 | HSA | – |
| GEI-MW-3 | IB | – | Y | BIJ 491 | 08/23/2014 | E | – | – | 65.5 | 59.5 | 31.5 | 30.75 | 49.4 | 59.4 | -18.65 | -28.65 | 2 | HSA | 59.4 |
| HMW-1D | Deep | 9 | Y | BLI 197 | 03/04/2019 | E | 1268909.169 | 231642.6025 | 95 | 90.5 | 38.39 | 38.05 | 80 | 90 | -41.95 | -51.95 | 2 | Sonic | 90.5 |
| HMW-1IB | IB | 9 | Y | BLR 917 | 03/13/2019 | E | 1268916.816 | 231662.2986 | 65.5 | 64.5 | 37.27 | 38.42 | 54.3 | 64.3 | -15.88 | -25.88 | 2 | HSA | 64.5 |
| HMW-1S | Shallow | 9 | Y | – | 03/06/2019 | E | 1268869.827 | 231663.4485 | 31.5 | 30.2 | 36.23 | 35.77 | 20 | 30 | 15.77 | 5.77 | 2 | HSA | 30.2 |
| HMW-2D | Deep | 9 | Y | BLI 198 | 03/06/2019 | E | 1268683.237 | 231667.3878 | 90 | 90 | 47.51 | 47.23 | 80 | 90 | -32.77 | -42.77 | 2 | Sonic | 90 |
| HMW-2IA | IA | 9 | Y | BLR 922 | 03/08/2019 | E | 1268697.187 | 231646.3137 | 45 | 44.8 | 47.78 | 47.56 | 34.8 | 44.8 | 12.76 | 2.76 | 2 | HSA | 45 |
| HMW-2IB | IB | 9 | Y | BLR 923 | 03/12/2019 | E | 1268687.256 | 231652.6621 | 63 | 62.8 | 47.57 | 47.23 | 52.8 | 62.8 | -5.57 | -15.57 | 2 | HSA | 62.8 |
| HMW-2S | Shallow | 9 | Y | BLR 924 | 03/13/2019 | E | 1268696.607 | 231659.6149 | 30 | 29.8 | 47.62 | 47.32 | 19.8 | 29.8 | 27.52 | 17.52 | 2 | HSA | 29.8 |
| HMW-3D | Deep | 9 | Y | BLI 199 | 03/06/2019 | E | 1268425.911 | 231682.1499 | 90 | 90 | 56.67 | 56.4 | 80 | 90 | 19.98 | 9.98 | 2 | Sonic | 90 |
| HMW-3IA | IA | 9 | Y | BLR 925 | 03/15/2019 | E | 1268409.28 | 231676.2595 | 45.5 | 45 | 55.11 | 54.78 | 34.8 | 44.8 | -23.6 | -33.6 | 2 | HSA | 45 |
| HMW-4IA | IA | 9 | Y | – | 03/07/2019 | E | 1268409.46 | 231559.1404 | 81.5 | 80 | 58.78 | 58.53 | 50 | 60 | 8.78 | -1.22 | 2 | HSA | 60 |
| MBGW-1 | Shallow | 4 | Y | – | 03/06/2019 | B | – | – | 30 | – | 45 | – | – | – | – | – | – | PP | – |
| MBGW-2 | Deep | 4 | Y | – | 03/05/2019 | B | – | – | 81 | – | 43.5 | – | – | – | – | – | – | HSA | – |
| MBGW-3 | Shallow | 3 | Y | – | 03/07/2019 | B | – | – | 28 | – | 47 | – | – | – | – | – | – | PP | – |
| MBGW-4 | Shallow | 3 | Y | – | 03/06/2019 | B | – | – | 25 | – | 46.5 | – | – | – | – | – | – | PP | – |
| MBGW-5 | IB | 8 | Y | – | 03/11/2019 | B | – | – | 76.5 | – | 53 | – | – | – | – | – | – | HSA | – |
| MBGW-6 | Shallow | 2 | Y | – | 03/14/2019 | B | – | – | 30.5 | – | 52 | – | – | – | – | – | – | HSA | – |
| MBGW-7 | IB | 8 | Y | – | 03/06/2019 | B | – | – | 75.3 | – | 52.5 | – | – | – | – | – | – | HSA | – |
| MBGW-8 | IB | 5 | Y | – | 03/15/2019 | B | – | – | 76.5 | – | 47 | – | – | – | – | – | – | HSA | – |
| MBGW-9 | Shallow | 6 | Y | – | 03/13/2019 | B | – | – | 31.5 | – | 52.5 | – | – | – | – | – | – | HSA | – |
| MBGW-10 | Shallow | 6 | Y | – | 03/13/2019 | B | – | – | 30.9 | – | – | – | – | – | – | – | – | HSA | – |
| MBGW-11 | IA | 6 | Y | – | 03/12/2019 | B | – | – | 50 | – | 53 | – | – | – | – | – | – | HSA | – |
| MBGW-12 | Shallow | 2 | Y | – | 03/15/2019 | B | – | – | 30.9 | – | 53.5 | – | – | – | – | – | – | HSA | – |
| MBGW-13 | Shallow | 2 | Y | – | 03/14/2019 | B | – | – | 31.5 | – | 54 | – | – | – | – | – | – | HSA | – |
| MBGW-14 | Shallow | 4 | Y | – | 03/06/2019 | B | – | – | 30 | – | 43.5 | – | – | – | – | – | – | PP | – |
| MBGW-15 | Deep | 4 | Y | – | 03/11/2019 | B | – | – | 81 | – | 39 | – | – | – | – | – | – | HSA | – |
| MBGW-16 | IB | 8 | Y | – | 03/14/2019 | B | – | – | 75.5 | – | 52 | – | – | – | – | – | – | HSA | – |
| MBPP-1 | Shallow | 4 | Y | – | 03/05/2019 | B | – | – | 30 | – | 43.5 | – | – | – | – | – | – | PP | – |
| MBPP-2 | Shallow | 4 | Y | – | 03/05/2019 | B | – | – | 30 | – | 43.5 | – | – | – | – | – | – | PP | – |
| MBPP-3 | Shallow | 5 | Y | – | 03/06/2019 | B | – | – | 30 | – | 43.5 | – | – | – | – | – | – | PP | – |
| MBPP-4 | Shallow | 5 | Y | – | 03/07/2019 | B | – | – | 18 | – | 47 | – | – | – | – | – | – | PP | – |

## Table 3 - Monitoring Well and Boring Construction Details

| Well/Boring # | Exploration/ Well Type | AOC | Log? | Well Tag | Date Completed | Well Status | Easting | Northing | Depth | | Elevation | | Well Screen | | | | Well Diam. (in) | Drill Rig Type | Casing Depth (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Total (ft bgs) | Well (ft bgs) | Ground (ft) | TOC (ft) | Depth (ft) | | Elevation (ft) | | | | |
| | | | | | | | | | | | | | Top | Bottom | Top | Bottom | | | |
| MBPP-5 | Shallow | 3 | Y | – | 03/07/2019 | B | – | – | 28 | – | 47 | – | – | – | – | – | – | PP | – |
| MBPP-6 | Shallow | 8 | Y | – | 03/08/2019 | B | – | – | 30 | – | 52 | – | – | – | – | – | – | PP | – |
| MBPP-7 | Shallow | 8 | Y | – | 03/08/2019 | B | – | – | 23 | – | 52 | – | – | – | – | – | – | PP | – |
| MBPP-8 | Shallow | 8 | Y | – | 03/08/2019 | B | – | – | 30 | – | 54 | – | – | – | – | – | – | PP | – |
| MW-8 | Shallow | 9 | N | – | – | – | – | – | 19 | 19 | – | 33.19 | 4.5 | 19 | 28.69 | 14.19 | 2 | – | – |
| MW-9 | Shallow | 9 | N | – | – | – | – | – | 22 | 22 | – | 40.81 | 7 | 22 | 33.81 | 18.81 | 2 | – | – |
| MW102 (B102) | Deep | 9 | Y | BCK-015 | 07/23/2012 | – | 1,268,504.81 | 232,058.51 | 125 | 125 | – | 49.19 | 115 | 125 | -65.81 | -75.81 | 2 | Sonic | – |
| MW103 (B103) | Deep | 9 | Y | BCK-016 | 07/27/2012 | – | 1,268,808.01 | 231,912.50 | 115 | 114 | – | 35.92 | 103.5 | 113.5 | -67.58 | -77.58 | 2 | Sonic | 114 |
| MW104 (B104) | Deep | 9 | Y | BCK-017 | 08/01/2012 | – | 1,268,635.95 | 231,912.28 | 130 | 129 | – | 42.68 | 119 | 129 | -76.32 | -86.32 | 2 | Sonic | 129 |
| MW105 (B105) | Deep | 9 | Y | BCK-018 | 08/10/2012 | E | 1,268,695.16 | 231,763.25 | 140 | 140 | – | 44.69 | 130 | 140 | -85.31 | -95.31 | 2 | Sonic | 140 |
| MW106 (B106) | Deep | 9 | Y | BCK-019 | 08/15/2012 | E | 1,268,501.66 | 231,720.28 | 140 | 140 | – | 51.99 | 130 | 140 | -78.01 | -88.01 | 2 | Sonic | 140 |
| MW107 (B107) | IA | 9 | Y | BHS-773 | 12/03/2012 | – | 1,268,625.93 | 231,885.46 | 45.5 | 45 | – | 43.82 | 35 | 45 | 8.82 | -1.18 | 2 | HSA | 45 |
| MW108 (B108) | IA | 9 | Y | BHS-765 | 12/14/2012 | – | 1,268,805.44 | 232,044.39 | 50.5 | 50 | – | 32.78 | 40 | 50 | -7.22 | -17.22 | 2 | HSA | 50 |
| MW109 (B109) | IA | 9 | Y | BHS-771 | 12/04/2012 | – | 1,268,808.76 | 231,943.07 | 45.5 | 45 | – | 34.97 | 35 | 45 | -0.03 | -10.03 | 2 | HSA | 45 |
| MW110 (B110) | IA | 9 | Y | BHS-772 | 12/04/2012 | – | 1,268,806.34 | 231,814.34 | 45.5 | 45 | – | 39.67 | 35 | 45 | 4.67 | -5.33 | 2 | HSA | 45 |
| MW111 (B111) | Deep | 9 | Y | BHS-770 | 12/06/2012 | – | 1,268,807.78 | 231,896.74 | 80.5 | 80 | – | 36.48 | 70 | 80 | -33.52 | -43.52 | 2 | HSA | 80 |
| MW112 (B112) | Deep | 9 | Y | BHS-767 | 12/12/2012 | – | 1,268,310.57 | 231,915.11 | 85.5 | 85 | 57.71 | 57.45 | 75 | 85 | -17.29 | -27.29 | 2 | HSA | 85 |
| MW113 (B113) | Deep | 9 | Y | BHS-764 | 12/18/2012 | – | 1,268,950.83 | 231,911.79 | 80 | 80 | 33.20 | 32.90 | 70 | 80 | -36.80 | -46.80 | 2 | HSA | 80 |
| MW114 (B114) | IA | 9 | Y | BHS-768 | 12/10/2012 | D | 1,268,537.67 | 231,656.12 | 45.5 | 45 | – | 45.84 | 35 | 45 | 10.84 | 0.84 | 2 | HSA | 45 |
| MW115 (B115) | IA | 9 | Y | BHS-766 | 12/13/2012 | – | 1,268,948.67 | 231,824.86 | 46 | 45 | 34.44 | 34.10 | 35 | 45 | -0.56 | -10.56 | 2 | HSA | 45 |
| MW116 (B116) | IA | 9 | Y | BHS-769 | 12/07/2012 | – | 1,268,952.65 | 232,006.18 | 46.5 | 45 | 31.92 | 31.34 | 35 | 45 | -3.08 | -13.08 | 2 | HSA | 45 |
| MW117 (B117) | IA | 9 | Y | BHS-885 | 02/04/2013 | D | 1,268,343.66 | 231,643.72 | 55.5 | 55 | – | 56.90 | 40 | 55 | 16.90 | 1.90 | 2 | HSA | 55 |
| MW118 (B118) | IA | 9 | Y | BIC-079 | 03/21/2013 | D | 1,268,503.40 | 231,491.37 | 55.5 | 50 | – | 52.91 | 40 | 50 | 12.91 | 2.91 | 2 | HSA | 50 |
| MW119 (B119) | IA | 9 | Y | BIC-080 | 03/21/2013 | E | 1,268,924.29 | 231,652.18 | 46 | 45 | 37.74 | 37.42 | 35 | 45 | 2.74 | -7.26 | 2 | HSA | 45 |
| MW120 (B120) | IA | 9 | Y | BID-015 | 12/16/2013 | – | 1,268,675.29 | 232,145.67 | 50.5 | 50 | – | 40.00 | 40 | 50 | 0.00 | -10.00 | 2 | HSA | 50 |
| MW121 (B121) | Shallow | 9 | Y | BID-016 | 12/16/2013 | – | 1,268,598.04 | 232,091.86 | 26.5 | 25 | – | 41.72 | 15 | 25 | 26.72 | 16.72 | 2 | HSA | – |
| MW122 (B122) | Deep | 9 | Y | – | 12/17/2013 | – | 1,268,810.95 | 232,139.15 | 115 | 115 | – | 30.03 | 105 | 115 | -74.97 | -84.97 | 2 | HSA | 115 |
| MW123 (B123) | Deep | 9 | Y | BID-018 | 12/18/2013 | – | 1,269,085.13 | 232,171.44 | 80 | 80 | – | 27.51 | 70 | 80 | -42.49 | -52.49 | 2 | HSA | 80 |
| MW124 (B124) | Deep | 9 | Y | – | 12/19/2013 | – | 1,268,387.41 | 232,058.20 | 120 | 120 | – | 56.24 | 110 | 120 | -53.76 | -63.76 | 2 | HSA | 120 |
| MW125 (B125) | Shallow | 9 | Y | BID-020 | 12/20/2013 | – | 1,268,598.04 | 232,091.86 | 31.5 | 30 | – | 43.55 | 15 | 30 | 28.55 | 13.55 | 2 | HSA | – |
| MW126 (B126) | Deep | 9 | Y | BID-021 | 12/30/2013 | – | 1,268,813.91 | 232,263.78 | 95 | 95 | – | 30.94 | 85 | 95 | -54.06 | -64.06 | 2 | HSA | – |
| MW127 (B127) | IA | 9 | Y | BID-022 | 12/31/2013 | – | 1,268,689.96 | 232,261.39 | 50.5 | 50 | – | 39.04 | 40 | 50 | -0.96 | -10.96 | 2 | HSA | 50 |
| MW128 (B128) | IB | 9 | Y | – | 01/09/2014 | – | 1,269,319.15 | 231,810.63 | 70.5 | 70 | 29.20 | 28.59 | 60 | 70 | -30.80 | -40.80 | 2 | HSA | 70 |
| MW-132 | IB | 9 | Y | BKA-298 | 8/23/20-17 | E | 1,268,494.61 | 231,916.83 | 83.0 | 80 | 40.10 | 40.07 | 70 | 80 | -29.90 | -39.90 | 2 | HSA | 55 |
| MW-133 | Deep | 9 | Y | BKA-297 | 08/17/2017 | – | 1,268,397.31 | 231,878.49 | 145 | 139 | 40.08 | 39.77 | 129 | 139 | -88.92 | -98.92 | 2 | Sonic | 62.5 |
| MW-135 | IB | 9 | Y | BKA-299 | 08/25/2017 | E | 1,268,495.24 | 231,963.50 | 80 | 80 | 39.11 | 38.96 | 70 | 80 | -30.89 | -40.89 | 2 | Sonic | -- |
| MW-137 | Deep | 9 | Y | – | 09/01/2017 | – | 1,268,471.72 | 231,851.07 | 115 | 115 | 51.73 | 51.46 | 105 | 115 | -53.27 | -63.27 | 2 | Sonic | 115.3 |
| MW-138 | Deep | 9 | Y | BKA-296 | 09/15/2017 | – | 1,268,345.42 | 231,841.79 | 117 | 115 | 57.48 | 57.06 | 105 | 115 | -47.52 | -57.52 | 2 | Sonic | 115 |
| MW-140 | Deep | 9 | Y | BKA-301 | 08/31/2017 | E | 1,268,511.94 | 231,782.78 | 140 | 140 | 50.57 | 50.20 | 129.5 | 139.5 | -78.93 | -88.93 | 2 | Sonic | 139.5 |
| MW-141 | Deep | 9 | Y | – | 09/19/2017 | – | 1,268,598.81 | 231,860.58 | 107 | 105 | 39.59 | 39.32 | 95.0 | 105.0 | -55.41 | -65.41 | 2 | Sonic | 105.4 |
| MW-142 | IA | 9 | N | BKF-356 | 04/12/2018 | – | 1,268,681.79 | 231,977.91 | 51.0 | 50 | 42.44 | 42.12 | 40 | 50 | 2.44 | 7.56 | 2 | HSA | – |
| MW-143 | Deep | 9 | Y | BKF-355 | 04/12/2018 | – | 1,268,681.54 | 231,974.66 | 82.0 | 80 | 42.43 | 42.04 | 70.1 | 80.0 | -27.67 | -37.57 | 2 | HSA | – |
| MW-144 | IA | 9 | N | BKF-355 | 04/18/2018 | – | 1,268,680.09 | 231,857.59 | 50.0 | 50 | 43.87 | 43.50 | 40 | 50 | 3.87 | 6.13 | 2 | HSA | – |
| MW-145 | Deep | 9 | N | BKF-360 | 04/18/2018 | – | 1,268,678.28 | 231,851.15 | 81.0 | 80 | 43.86 | 43.46 | 70 | 80 | -26.14 | -36.14 | 2 | HSA | – |
| MW-146 | IA | 9 | N | BKF-349 | 03/30/2018 | E | 1,268,493.78 | 231,733.61 | 50.0 | 51 | 52.74 | 52.34 | 39.8 | 49.8 | 12.94 | 2.94 | 2 | HSA | – |
| MW-147 | IB | 9 | Y | BKF-351 | 04/02/2018 | E | 1,268,501.67 | 231,733.85 | 80.0 | 80 | 52.36 | 51.85 | 70 | 80 | -17.64 | -27.64 | 2 | HSA | – |
| MW-148 | IB | 9 | Y | BKF-353 | 04/09/2018 | E | 1,268,725.60 | 231,731.90 | 80.5 | 80 | 44.27 | 43.91 | 70 | 80 | -25.73 | -35.73 | 2 | HSA | – |
| MW-149 | IA | 9 | N | BKF-142 | 03/12/2018 | – | 1,268,528.97 | 231,983.66 | 46.0 | 45 | 35.66 | 35.22 | 35 | 45 | 0.66 | 9.34 | 2 | HSA | – |
| MW-150 | IB | 9 | N | BKF-141 | 03/09/2018 | – | 1,268,528.54 | 231,978.38 | 60.0 | 59 | 35.75 | 35.39 | 49 | 59 | -13.25 | -23.25 | 2 | HSA | – |
| MW-151 | IA | 9 | N | BKF-143 | 03/12/2018 | – | 1,268,403.10 | 231,899.51 | 46.0 | 45 | 39.94 | 39.38 | 35 | 45 | 4.94 | 5.06 | 2 | HSA | – |
| MW-152 | IB | 9 | Y | BKF-144 | 03/13/2018 | – | 1,268,391.47 | 231,898.22 | 60.0 | 60 | 39.85 | 39.11 | 50 | 60 | -10.15 | -20.15 | 2 | HSA | – |
| MW-153 | Deep | 9 | Y | BKF-348 | 03/29/2018 | E | 1,268,443.98 | 231,734.96 | 130 | 131 | 54.75 | 54.35 | 120 | 130 | -65.25 | -75.25 | 2 | HSA | – |

## Table 3 - Monitoring Well and Boring Construction Details

| Well/Boring # | Exploration/ Well Type | AOC | Log? | Well Tag | Date Completed | Well Status | Easting | Northing | Depth | | Elevation | | Well Screen | | | | Well Diam. (in) | Drill Rig Type | Casing Depth (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Total (ft bgs) | Well (ft bgs) | Ground (ft) | TOC (ft) | Depth (ft) | | Elevation (ft) | | | | |
| | | | | | | | | | | | | | Top | Bottom | Top | Bottom | | | |
| MW-154 | Shallow | 9 | N | BKF-350 | 03/30/2018 | E | 1,268,485.83 | 231,733.87 | 35.0 | 36 | 53.05 | 52.57 | 25 | 35 | 27.57 | 13.55 | 2 | HSA | – |
| MW-155 | Shallow | 9 | N | BKF-354 | 04/10/2018 | E | 1,268,721.17 | 231,733.31 | 30.0 | 30 | 44.39 | 44.05 | 20 | 30 | 24.05 | 13.55 | 2 | HSA | – |
| MW-156 | IA | 9 | N | BKF-359 | 04/16/2018 | E | 1,268,683.09 | 232,036.58 | 51.0 | 50 | 41.64 | 41.24 | 39.6 | 49.6 | 2.04 | 7.96 | 2 | HSA | – |
| MW-157 | Deep | 9 | N | BKF-357 | 04/13/2018 | – | 1,268,683.21 | 232,040.85 | 81.0 | 80 | 41.61 | 41.22 | 69.9 | 79.8 | -28.29 | -38.19 | 2 | HSA | – |
| MW-158A | Deep | 9 | Y | BKF-352 | 04/06/2018 | – | 1,268,683.06 | 232,045.84 | 100.5 | 100 | 41.51 | 41.09 | 89.7 | 100 | -48.15 | -58.49 | 2 | HSA | – |
| MW-159 | Shallow | 9 | Y | BKF-358 | 04/16/2018 | – | 1,268,680.42 | 231,910.30 | 31.0 | 30.4 | 43.25 | 42.79 | 20.4 | 30.4 | 22.39 | 13.55 | 2 | HSA | – |
| MW-160 | Deep | 9 | Y | BKF-460 | 05/10/2018 | – | – | – | 128.0 | 128 | 41.51 | 43.46 | 118 | 128 | -76.49 | -86.49 | 2 | HSA | – |
| MW-161 | Deep | 9 | Y | BKF-460 | 05/06/2018 | – | – | – | 140.0 | 140 | 41.51 | 43.82 | 130 | 140 | -88.49 | -98.49 | 2 | HSA | – |
| MW-214 | Shallow | 9 | N | – | – | – | 1,269,388.42 | 231,861.09 | – | 17 | 27.81 | 27.32 | 7 | 17 | 20.81 | 10.81 | 2 | – | – |
| PB-9 | Deep | 9 | Y | – | 07/15/1996 | B | – | – | – | – | – | – | – | – | – | – | – | HSA | – |
| PW-4 | – | – | – | – | – | B | – | – | – | – | – | – | – | – | – | – | – | – | – |
| R-MW4 | Shallow | 9 | Y | – | 10/23/1992 | D | – | – | 36.5 | 30 | 40.94 | – | 15 | 30 | – | – | – | HSA | 30 |
| R-MW5 | Shallow | – | Y | – | 10/27/1992 | E | 1,268,352.09 | 231,915.17 | 31.5 | 30 | 47.2 | 57.03 | 15 | 30 | 42.03 | 27.03 | 2 | HSA | 30 |
| R-MW6 | Shallow | 9 | Y | – | 10/27/1992 | – | 1,268,622.13 | 231,825.18 | 22 | 22 | 35.39 | 45.28 | 12 | 22 | 33.28 | 23.28 | 2 | HSA | 22 |
| SCL-MW101 | Shallow | – | N | – | 06/01/2002 | – | – | – | – | 15 | – | 30.46 | 5 | 15 | 25.46 | 15.46 | 2 | – | – |
| SCL-MW105 | Shallow | – | N | – | 06/01/2002 | – | – | – | – | 30 | – | 31.26 | 20 | 30 | 11.26 | 1.26 | 2 | – | – |
| SCS-2 | Shallow | – | N | – | – | – | – | – | – | 21 | – | 39.16 | 11 | 21 | 28.16 | 18.16 | 4 | – | – |
| SMW-3 | Shallow | – | N | – | – | – | 1,269,463.18 | 231,959.15 | – | 20 | 27.09 | 26.57 | 10 | 20 | 17.09 | 7.09 | 2 | – | – |
| TB-7 | – | – | – | – | – | B | – | – | – | – | – | – | – | – | – | – | – | – | – |
| TB-12 | Deep | 6 | Y | – | 08/01/1997 | D | – | – | 120.8 | 120 | 151 | – | 110 | 120 | – | – | 2 | MR | 120 |
| TB-18 | Deep | 3 | Y | – | 03/17/1998 | D | – | – | 120.5 | 118 | 145.3 | – | 93 | 118 | – | – | 2 | MR | 118 |
| TH-5 | IA | – | Y | – | 09/27/1966 | – | – | – | 50 | – | 17.8 | – | – | – | – | – | – | – | – |
| TH-7 | Shallow | 4 | Y | – | 11/03/1969 | B | – | – | 39 | – | 28 | – | – | – | – | – | – | – | – |

**Notes**

Datum Vertical - NGVD88 - feet
Datum Horizontal  - Washington State Plane North 83 - feet
Well Status  D - Decommissioned; E -
Drill Rig Type: HAS - hollow stem auger; MR - mud rotary; PP- push probe; S - Sonic

## Table 4 - Summary of Grain Size Data

| Borehole | Depth (ft) | Gravel (%) | Sand (%) | Fines (%) | D60 (mm) | D30 (mm) | D10 (mm) | Hazen (cm/sec) | Cc | Cu | USGS | Soil Descriptions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HMW-1IB | 15 | 48.5 | 43.4 | 8.1 | -- | -- | -- | -- | -- | -- | GP-GM | Poorly Graded Gravel with Silt and Sand |
| HMW-1IB | 20.5 | 6.1 | 43.8 | 50.1 | -- | -- | -- | -- | -- | -- | CL | Sandy Lean Clay |
| HMW-1IB | 35 | 0 | 82.6 | 17.4 | 0.23 | 0.13 | -- | -- | -- | -- | SM | Silty Sand |
| HMW-1IB | 40 | 0.8 | 94 | 5.2 | 0.39 | 0.26 | 0.14 | 0.02 | 1.29 | 2.85 | SP-SM | Poorly Graded Sand with Silt |
| HMW-1IB | 45 | 0.3 | 89.7 | 10 | 0.35 | 0.21 | -- | -- | 1.72 | 4.67 | SP-SM | Poorly Graded Sand with Silt |
| HMW-1IB | 50 | 39.5 | 44.5 | 16.1 | 4.6 | 0.37 | -- | -- | -- | -- | SM | Silty Sand with Gravel |
| HMW-1IB | 60 | 41.4 | 46.4 | 12.2 | 5.19 | 0.82 | -- | -- | 2.6 | 104 | SC | Clayey Gravel with Sand |
| HMW-1IB | 65 | 44.4 | 40.8 | 14.8 | 7.86 | 0.36 | -- | -- | -- | -- | GC | Clayey Gravel with Sand |
| HMW-4IA | 22.5 | 23.9 | 48.7 | 27.4 | -- | -- | -- | -- | -- | -- | SM | Silty Sand with Gravel |
| HMW-4IA | 27.5 | 1.3 | 15.4 | 83.3 | -- | -- | -- | -- | -- | -- | ML | Silt with Sand |
| HMW-4IA | 35 | 9.1 | 66.4 | 24.5 | 0.36 | 0.72 | -- | -- | -- | -- | SM | Silty Sand |
| HMW-4IA | 50 | 0.9 | 29.6 | 69.5 | -- | -- | -- | -- | -- | -- | ML | Silt with Sand |
| HMW-4IA | 75 | 0.4 | 82.4 | 17.2 | 0.4 | 0.18 | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-2 | 17.5 | 30.5 | 52.7 | 16.8 | 1.49 | 0.2 | -- | -- | -- | -- | SM | Silty Sand with Gravel |
| MBGW-2 | 20 | 38.6 | 39.3 | 22.2 | 3.41 | 0.18 | -- | -- | -- | -- | SM | Silty Sand with Gravel |
| MBGW-2 | 25 | 18.1 | 65.1 | 16.8 | 0.46 | 0.15 | -- | -- | -- | -- | SM | Silty Sand with Gravel |
| MBGW-2 | 30 | 0 | 89.7 | 10.3 | 0.39 | 0.26 | -- | -- | 2.3 | 5.44 | SP-SM | Poorly Graded Sand with Silt |
| MBGW-2 | 35 | 5.9 | 87.9 | 6.2 | 0.39 | 0.24 | 0.12 | 0.01 | 1.22 | 3.2 | SP-SM | Poorly Graded Sand with Silt |
| MBGW-2 | 40 | 0.5 | 94 | 5.4 | 0.28 | 0.18 | 0.1 | 0.01 | 1.18 | 2.8 | SP-SM | Poorly Graded Sand with Silt |
| MBGW-2 | 50 | 23.1 | 69.9 | 7 | 1.1 | 0.28 | 0.11 | 0.01 | 0.67 | 9.8 | SP-SM | Poorly Graded Sand with Silt |
| MBGW-2 | 55 | 32.2 | 56.1 | 11.7 | 1.8 | 0.3 | -- | -- | 0.89 | 32.1 | SP-SM | Poorly-Graded Sand with Silt and Gravel |
| MBGW-2 | 70 | 21.5 | 67.2 | 11.3 | 1.91 | 0.4 | -- | -- | 1.32 | 30 | SW-SM | Well-Graded Sand with Silt and Gravel |
| MBGW-2 | 75 | 18.8 | 69.3 | 11.8 | 0.51 | 0.22 | -- | -- | 1.54 | 8.2 | SW-SM | Well-Graded Sand with Silt and Gravel |
| MBGW-7 | 25 | 6.3 | 74 | 19.8 | 0.36 | 0.15 | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-7 | 45 | 0 | 15.7 | 84.3 | -- | -- | -- | -- | -- | -- | ML | Silt with Sand |
| MBGW-7 | 70 | 1.5 | 27.2 | 71.3 | -- | -- | -- | -- | -- | -- | ML | Silt with Sand |
| MBGW-8 | 12.5 | 4.9 | 68 | 27.1 | 0.33 | 0.09 | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-8 | 15 | 3.7 | 75.3 | 21 | 0.24 | 0.11 | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-8 | 20 | 11.5 | 58.1 | 30.4 | 0.32 | -- | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-8 | 30 | 4.8 | 55.8 | 39.4 | -- | -- | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-8 | 50 | 0.3 | 17.6 | 82.1 | -- | -- | -- | -- | -- | -- | ML | Silt with Sand |
| MBGW-8 | 60 | 10.4 | 86.4 | 3.1 | 0.92 | 0.39 | 0.2 | 0.04 | 0.83 | 4.75 | SP | Poorly Graded Sand |
| MBGW-8 | 75 | 17.8 | 67.6 | 14.6 | 0.67 | 0.28 | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-16 | 17.5 | 2.7 | 24.4 | 72.9 | -- | -- | -- | -- | -- | -- | CL | Lean Clay with Sand |
| MBGW-16 | 22.5 | 6.5 | 67.3 | 26.3 | 0.36 | -- | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-16 | 30 | 0.6 | 64.5 | 34.9 | 0.25 | -- | -- | -- | -- | -- | SM | Silty Sand |
| MBGW-16 | 50 | 17.5 | 49.5 | 33 | 0.36 | -- | -- | -- | -- | -- | SM | Silty Sand with Gravel |

## Table 5 - Groundwater Elevations

| Well ID | Unit | Date Measured | Time of Measure | Elevation Top of casing (feet) | Depth to Water (feet) | Groundwater Elevation (feet) |
|---|---|---|---|---|---|---|
| DMW-1S | Shallow | 3/21/2019 | -- | 55.76 | 21.01 | 34.75 |
| DMW-1S | Shallow | 3/27/2019 | -- | 55.76 | 20.88 | 34.88 |
| HMW-4IA | Intermediate A | 3/19/2019 | -- | 58.53 | 29.50 | 29.03 |
| HMW-4IA | Intermediate A | 3/26/2019 | 9:33 | 58.53 | 30.13 | 28.40 |
| HMW-4IA | Intermediate A | 3/26/2019 | 9:54 | 58.53 | 30.21 | 28.32 |
| HMW-4IA | Intermediate A | 3/26/2019 | 10:04 | 58.53 | 30.03 | 28.50 |
| HMW-4IA | Intermediate A | 3/26/2019 | 16:54 | 58.53 | 30.21 | 28.32 |
| HMW-4IA | Intermediate A | 7/17/2019 | 11:14 | 58.53 | 33.19 | 25.34 |
| HMW-4IA | Intermediate A | 7/17/2019 | 11:53 | 58.53 | 33.10 | 25.43 |
| HMW-3IA | Intermediate A | 3/19/2019 | -- | 54.78 | 23.71 | 31.07 |
| HMW-3IA | Intermediate A | 3/26/2019 | 10:39 | 54.78 | 24.07 | 30.71 |
| HMW-3IA | Intermediate A | 3/26/2019 | 10:51 | 54.78 | 23.99 | 30.79 |
| HMW-3IA | Intermediate A | 7/16/2019 | 16:16 | 54.78 | 28.12 | 26.66 |
| HMW-3IA | Intermediate A | 7/16/2019 | 16:29 | 54.78 | 28.11 | 26.67 |
| HMW-3D | Deep | 3/19/2019 | -- | 56.40 | 38.90 | 17.50 |
| HMW-3D | Deep | 3/26/2019 | 10:15 | 56.40 | 38.90 | 17.50 |
| HMW-3D | Deep | 3/26/2019 | 10:35 | 56.40 | 38.77 | 17.63 |
| HMW-3D | Deep | 7/16/2019 | 16:41 | 56.40 | 39.12 | 17.28 |
| HMW-3D | Deep | 7/16/2019 | 17:04 | 56.40 | 39.11 | 17.29 |
| HMW-2S | Shallow | 3/19/2019 | -- | 47.32 | 21.68 | 25.64 |
| HMW-2S | Shallow | 3/26/2019 | -- | 47.32 | 24.21 | 23.11 |
| HMW-2S | Shallow | 7/16/2019 | 15:19 | 47.32 | 23.98 | 23.34 |
| HMW-2IA | Intermediate A | 3/20/2019 | -- | 47.56 | 18.61 | 28.95 |
| HMW-2IA | Intermediate A | 3/26/2019 | 13:39 | 47.56 | 19.11 | 28.45 |
| HMW-2IA | Intermediate A | 7/16/2019 | 15:23 | 47.56 | 24.27 | 23.29 |
| HMW-2IA | Intermediate A | 7/16/2019 | 15:44 | 47.56 | 24.28 | 23.28 |
| HMW-2IB | Intermediate B | 3/20/2019 | -- | 47.23 | 27.50 | 19.73 |
| HMW-2IB | Intermediate B | 3/26/2019 | -- | 47.23 | 27.32 | 19.91 |
| HMW-2IB | Intermediate B | 7/16/2019 | 15:09 | 47.23 | 28.29 | 18.94 |
| HMW-2D | Deep | 3/19/2019 | -- | 47.23 | 27.98 | 19.25 |
| HMW-2D | Deep | 3/26/2019 | -- | 47.23 | 27.26 | 19.97 |
| HMW-2D | Deep | 3/26/2019 | 13:02 | 47.23 | 26.48 | 20.75 |
| HMW-2D | Deep | 5/16/2019 | 12:42 | 47.23 | 27.95 | 19.28 |
| HMW-2D | Deep | 7/16/2019 | 15:56 | 47.23 | 28.66 | 18.57 |
| HMW-2D | Deep | 8/15/2019 | 15:27 | 47.23 | 29.17 | 18.06 |
| HMW-1S | Shallow | 3/20/2019 | -- | 35.77 | 16.11 | 19.66 |
| HMW-1S | Shallow | 3/26/2019 | -- | 35.77 | 16.21 | 19.56 |
| HMW-1S | Shallow | 7/16/2019 | 17:21 | 35.77 | 16.85 | 18.92 |
| HMW-1IB | Intermediate B | 3/20/2019 | -- | 38.42 | 19.29 | 19.13 |
| HMW-1IB | Intermediate B | 3/26/2019 | 14:29 | 38.42 | 19.46 | 18.96 |
| HMW-1IB | Intermediate B | 3/26/2019 | 15:18 | 38.42 | 19.47 | 18.95 |
| HMW-1IB | Intermediate B | 5/16/2019 | 13:23 | 38.42 | 19.22 | 19.20 |
| HMW-1IB | Intermediate B | 7/17/2019 | 14:00 | 38.42 | 19.87 | 18.55 |
| HMW-1IB | Intermediate B | 7/17/2019 | 14:32 | 38.42 | 19.89 | 18.53 |
| HMW-1IB | Intermediate B | 8/15/2019 | 17:05 | 38.42 | 20.25 | 18.17 |
| HMW-1D | Deep | 3/20/2019 | -- | 38.05 | 20.33 | 17.72 |
| HMW-1D | Deep | 3/26/2019 | 14:22 | 38.05 | 20.34 | 17.71 |
| HMW-1D | Deep | 5/16/2019 | 13:10 | 38.05 | 19.90 | 18.15 |
| HMW-1D | Deep | 7/16/2019 | 17:18 | 38.05 | 20.28 | 17.77 |
| HMW-1D | Deep | 7/16/2019 | 17:32 | 38.05 | 20.28 | 17.77 |
| HMW-1D | Deep | 7/17/2019 | 14:09 | 38.05 | 20.32 | 17.73 |
| HMW-1D | Deep | 7/30/2019 | 12:21 | 38.05 | 20.50 | 17.55 |
| HMW-1D | Deep | 8/15/2019 | 16:20 | 38.05 | 20.60 | 17.45 |
| MW-106 | Deep | 3/26/2019 | 11:10 | 51.99 | 34.43 | 17.56 |
| MW-106 | Deep | 7/17/2019 | 12:23 | 51.99 | 34.62 | 17.37 |
| MW-146 | Intermediate A | 3/26/2019 | 11:20 | 52.34 | 21.12 | 31.22 |
| MW-146 | Intermediate A | 7/17/2019 | 12:35 | 52.34 | 30.16 | 22.18 |
| MW-147 | Deep | 3/26/2019 | 11:16 | 51.85 | 26.36 | 25.49 |
| MW-147 | Deep | 7/17/2019 | 12:30 | 51.85 | 31.53 | 20.32 |
| MW-148 | Deep | 3/26/2019 | 11:40 | 43.91 | 24.21 | 19.70 |
| MW-153 | Deep | 3/26/2019 | -- | 54.35 | 36.85 | 17.50 |
| MW-153 | Deep | 7/17/2019 | 12:45 | 54.35 | 37.11 | 17.24 |
| MW-154 | Shallow | 3/26/2019 | -- | 52.57 | 21.94 | 30.63 |
| MW-154 | Shallow | 7/17/2019 | 12:40 | 52.57 | 27.02 | 25.55 |
| MW-155 | Shallow | 3/26/2019 | 11:37 | 44.05 | 17.20 | 26.85 |
| MW-119 | Intermediate A | 3/26/2019 | 11:44 | 37.42 | 18.69 | 18.73 |
| MW-119 | Intermediate A | 3/26/2019 | 16:02 | 37.42 | 18.62 | 18.80 |
| MW-119 | Intermediate A | 7/17/2019 | 13:15 | 37.42 | 18.97 | 18.45 |
| MW-119 | Intermediate A | 7/17/2019 | 14:49 | 37.42 | 18.97 | 18.45 |
| MW-119 | Intermediate A | 7/30/2019 | 11:25 | 37.42 | 19.18 | 18.24 |
| FMW-129 | Deep | 3/26/2019 | 15:29 | 38.32 | 19.99 | 18.33 |
| FMW-129 | Deep | 5/16/2019 | 13:38 | 38.32 | 19.56 | 18.76 |
| FMW-129 | Deep | 7/16/2019 | 17:38 | 38.32 | 20.06 | 18.26 |
| FMW-129 | Deep | 7/17/2019 | 13:05 | 38.32 | 20.13 | 18.19 |
| FMW-129 | Deep | 7/30/2019 | 11:54 | 38.32 | 20.33 | 17.99 |
| FMW-129 | Deep | 7/30/2019 | 12:04 | 38.32 | 20.33 | 17.99 |
| FMW-129 | Deep | 7/30/2019 | 12:22 | 38.32 | 20.34 | 17.98 |

## Table 6 - Summary of Slug Testing Data

| Well ID | Bouwer and Rice | |
|---|---|---|
| | K in ft/day | K in cm/sec |
| DMW-1S | *15.9* | *5.6E-03* |
| HMW-1D | *4.3* | *1.5E-03* |
| HMW-1IB | *1.9* | *6.8E-04* |
| HMW-1S | *0.4* | *1.3E-04* |
| HMW-2D | *0.2* | *5.5E-05* |
| HMW-2IA | *2.3* | *8.0E-04* |
| HMW-2IB | *1.4* | *5.0E-04* |
| HMW-2S | *5.9* | *2.1E-03* |
| HMW-3D | *0.2* | *6.8E-05* |
| HMW-3IA | *0.2* | *9.1E-05* |
| HMW-4IA | *0.6* | *2.2E-04* |

## Table 7 - Summary of MTCA Cleanup Levels and Contaminants of Concern

| Detected Analyte | MTCA Cleanup Level | Contaminant of Concern? |
|---|---|---|
| **Soil** | | |
| **TPH in mg/kg** | | |
| Diesel | 2000 | No |
| Heavy Oil | 2000 | No |
| Gasoline | 100 [a] | Yes |
| **Metals in mg/kg** | | |
| Arsenic | 20 | No |
| Barium | 1600 | No |
| Chromium | 2000 [b] | No |
| Lead | 250 | No |
| **cPAHs in mg/kg** | 0.1 | Yes |
| **Volatiles in mg/kg** | | |
| 1,2,4-Trimethylbenzene | N/A | No |
| 1,3,5-Trimethylbenzene | N/A | No |
| Cis-1,2-Dichloroethene | 0.078 | Yes |
| Ethylbenzene | 6 | No |
| Isopropylbenzene | N/A | No |
| Isopropyltoluene | N/A | No |
| n-Butylbenzene | N/A | No |
| n-Propylbenzene | N/A | No |
| Sec-Butylbenzene | N/A | No |
| Tert-Butylbenzene | N/A | No |
| Tetrachloroethene | 0.05 | Yes |
| Toluene | 7 | No |
| Trichloroethene | 0.03 | Yes |
| Xylenes | 9 | No |
| **Groundwater** | | |
| **TPH in µg/L** | | |
| Gasoline | 800 [c] | No |
| **Metals in µg/L** | | |
| Arsenic | 5 | Yes |
| Barium | 2000 * | No |
| Chromium | 50 | No |
| Lead | 15 | No |
| **Volatiles in µg/L** | | |
| 1,2,4-Trichlorobenzene | 70 * | No |
| 1,2,4-Trimethylbenzene | 80 | No |
| 1,3,5-Trimethylbenzene | 80 | No |
| Benzene | 5 | No |
| Cis-1,2-Dichloroethene | 16 | Yes |
| Ethylbenzene | 700 * | No |
| Isopropylbenzene | N/A | No |
| Isopropyltoluene | N/A | No |
| n-Propylbenzene | 800 | No |
| Sec-Butylbenzene | 800 | No |
| Tetrachloroethene | 5 | Yes |
| Toluene | 1000 | No |
| Trans-1,2-Dichloroethene | 100 * | No |
| Trichloroethene | 5 | Yes |
| Vinyl Chloride | 0.2 | Yes |
| Xylenes | 1000 | No |

Notes:

If analyte is identified as Contaminant of Concern, it was detected at a concentration exceeding the applicable MTCA cleanup level.

* Screening level is Maximum Contaminent Level (MCL).

a. 100 mg/kg for gasoline mixtures without benzene, otherwise, 30 mg/kg.

b. 19 mg/kg as Chromium VI/2000 mg/kg as Chromium III.

c. 1000 µg/L for gasoline mixtures without benzene, otherwise, 800 µg/L.

N/A = No established MTCA cleanup level.

## Table 9 - Analytical Results for Detected Organics in Soil Samples



| Sample Location | Sampling Date | AOC | Depth in Feet | Sample Elevation | NWTPH in mg/kg | | | Total cPAHs TEQ in µg/kg | Volatiles in mg/kg | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DRO | HRO | GRO | | cis-1,2-Dichloro-ethene | Trichloro-ethene | Toluene | Tetrachloro-ethene | Ethyl-benzene | Xylenes | Isopropyl-benzene | n-Propyl-benzene | 1,3,5-Trimethyl-benzene | tert-Butyl-benzene | 1,2,4-Trimethyl-benzene | sec-Butyl-benzene | Isopropyl-toluene | n-Butyl-benzene |
| DGW-1 | 3/6/2019 | 1 | 10 | 37 | 20 U | 50 U | 5 U | NC | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 12.5 | 34.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 15 | 32 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 25 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 30 | 17 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DGW-2 | 3/4/2019 | 1 | 5 | 54 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 10 | 49 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 25 | 34 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 30 | 29 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DGW-3 | 3/6/2019 | 1 | 2.5 | 44.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 12.5 | 34.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 15 | 32 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 20 | 27 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 1 | 25 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DGW-4 | 3/4/2019 | 1 | 5 | 60 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 10 | 55 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 15 | 50 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 20 | 45 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 35 | 30 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 50 | 15 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DMW-1S | 3/23/2019 | 1 | 5 | 42 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/23/2019 | 1 | 10 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.053** | **0.071** | 0.05 U | **0.11** | **0.19** | 0.05 U | **0.51** | **0.071** | **0.12** | **0.18** |
| | 3/23/2019 | 1 | 12.5 | 34.5 | 20 U | 50 U | **1200** | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **2.1** | **4.4** | **1.5** | **3.2** | **6.2** | **0.105** | **13** | **1.9** | **3.2** | **0.82** |
| | 3/23/2019 | 1 | 15 | 32 | -- | -- | **67** | NC | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.12** | **0.2** | **0.12** | **0.28** | **0.76** | 0.05 U | **1.9** | **0.25** | **0.48** | **0.58** |
| | 3/23/2019 | 1 | 20 | 27 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-1 | 3/4/2019 | 1 | 5 | 54.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 7.5 | 52 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 10 | 49.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 20 | 39.5 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-2 | 3/4/2019 | 1 | 5 | 54 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 10 | 49 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-3 | 3/5/2019 | 1 | 5 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 1 | 15 | | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 1 | 30 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-4 | 3/4/2019 | 1 | 10 | 49 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 12.5 | 46.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 17.5 | 41.5 | | | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 20 | 39 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-5 | 3/4/2019 | 1 | 10 | 49 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 17.5 | 41.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 1 | 20 | 39 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| DPP-6 | 3/5/2019 | 1 | 5 | 42 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 1 | 7.5 | 39.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 1 | 12.5 | 34.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 1 | 17.5 | 29.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| HMW-1IB | 03/12/19 | 4 | 7.5 | 30.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 4 | 15 | 23 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 4 | 20.5 | 18 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 4 | 27.5 | 10.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 4 | 50 | -12 | -- | -- | -- | -- | 0.05 U | **0.24** | 0.05 U | **0.12** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 4 | 65 | -27 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |

## Table 9 - Analytical Results for Detected Organics in Soil Samples



| Sample Location | Sampling Date | AOC | Depth in Feet | Sample Elevation | NWTPH in mg/kg | | | Total cPAHs TEQ in µg/kg | Volatiles in mg/kg | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DRO | HRO | GRO | | cis-1,2-Dichloro-ethene | Trichloro-ethene | Toluene | Tetrachloro-ethene | Ethyl-benzene | Xylenes | Isopropyl-benzene | n-Propyl-benzene | 1,3,5-Trimethyl-benzene | tert-Butyl-benzene | 1,2,4-Trimethyl-benzene | sec-Butyl-benzene | Isopropyl-toluene | n-Butyl-benzene |
| HMW-2IB | 03/12/19 | 9 | 7.5 | 39.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 9 | 15 | 32 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 9 | 22.5 | 24.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 9 | 30 | 17 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 9 | 45 | 2 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | **0.12** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/19 | 9 | 65 | -18 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| HMW-3IA | 3/15/2019 | 2 | 15 | 40.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 20 | 35.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 22.5 | 33 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 25 | 30.5 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| HMW-4IA | 03/07/19 | 7 | 5 | 51 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/07/19 | 7 | 7.5 | 48.5 | **160** | 50 U | 5 U | **0.290** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/07/19 | 7 | 10 | 46 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/07/19 | 7 | 25 | 31 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-1 | 3/6/2019 | 4 | 5 | 40 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 12.5 | 32.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 17.5 | 27.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 25 | 20 | 20 U | 50 U | 5 U | NC | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 30 | 15 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-2 | 3/4/2019 | 4 | 5 | 38.5 | 20 U | 50 U | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 3/4/2019 | 4 | 10 | 33.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 4 | 12.5 | 31 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 4 | 25 | 18.5 | 20 U | 50 U | 5 U | NC | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/4/2019 | 4 | 30 | 13.5 | 20 U | 50 U | 5 U | NC | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-3 | 3/7/2019 | 3 | 5 | 42 | 20 U | 50 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 3/7/2019 | 3 | 7.5 | 39.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 10 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 12.5 | 34.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 25 | 22 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 26 | 21 | 20 U | 50 U | 5 U | NC | 0.05 U | 0.05 U | 0.05 U | **0.074** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-4 | 3/6/2019 | 3 | 5 | 41.5 | 20 U | 50 U | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 3/6/2019 | 3 | 7.5 | 39 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 3 | 10 | 36.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 3 | 12.5 | 34 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 3 | 25 | 21.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-5 | 3/11/2019 | 8 | 10 | 43 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/11/2019 | 8 | 15 | 38 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/11/2019 | 8 | 20 | 33 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/11/2019 | 8 | 27.5 | 25.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/11/2019 | 8 | 45 | 8 | 20 U | 50 U | 5 U | -- | **0.26** | **0.47** | 0.05 U | **3.4** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-6 | 3/14/2019 | 2 | 10 | 42 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/14/2019 | 2 | 15 | 37 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/14/2019 | 2 | 20 | 32 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/14/2019 | 2 | 30 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-7 | 3/6/2019 | 8 | 30 | 22.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-8 | 3/15/2019 | 5 | 10 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 5 | 15 | 32 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 5 | 25 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 5 | 35 | 12 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-9 | 3/13/2019 | 6 | 10 | 42.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 15 | 37.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 20 | 32.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 25 | 27.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 30 | 22.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |

## Table 9 - Analytical Results for Detected Organics in Soil Samples



| Sample Location | Sampling Date | AOC | Depth in Feet | Sample Elevation | NWTPH in mg/kg | | | Total cPAHs TEQ in µg/kg | Volatiles in mg/kg | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DRO | HRO | GRO | | cis-1,2-Dichloro-ethene | Trichloro-ethene | Toluene | Tetrachloro-ethene | Ethyl-benzene | Xylenes | Isopropyl-benzene | n-Propyl-benzene | 1,3,5-Trimethyl-benzene | tert-Butyl-benzene | 1,2,4-Trimethyl-benzene | sec-Butyl-benzene | Isopropyl-toluene | n-Butyl-benzene |
| MBGW-10 | 3/13/2019 | 6 | 10 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 15 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 20 | | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 25 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/13/2019 | 6 | 30 | | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-11 | 3/12/2019 | 6 | 5 | 48 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/12/2019 | 6 | 10 | 43 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-12 | 3/15/2019 | 2 | 5 | 48.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 20 | 33.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 25 | 28.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/15/2019 | 2 | 30 | 23.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-13 | 03/14/19 | 2 | 5 | 49 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/14/19 | 2 | 7.5 | 46.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.17** | **0.190** | 0.05 U | **0.10** | **0.20** | 0.05 U | **0.055** | 0.05 U | 0.05 U | **0.055** |
| | 03/14/19 | 2 | 10 | 44 | 20 U | 50 U | **730** | -- | 0.05 U | 0.05 U | **0.14** | 0.05 U | **3.9** | **7** | **0.97** | **3** | **5.7** | 0.05 U | **15** | 0.05 U | **0.97** | **2.20** |
| | 03/14/19 | 2 | 12.5 | 41.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.5** | **0.63** | **0.085** | **0.25** | **0.051** | 0.05 U | **1.6** | 0.05 U | **0.103** | **0.23** |
| | 03/14/19 | 2 | 15 | 39 | 20 U | 50 U | **16** | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.011** | 0.05 U | 0.05 U | 0.05 U | **0.079** | 0.05 U | **0.21** | 0.05 U | 0.05 U | 0.05 U |
| | 03/14/19 | 2 | 20 | 34 | -- | -- | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.06** | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | **0.12** | 0.05 U | 0.05 U | 0.05 U |
| MBGW-14 | 3/6/2019 | 4 | 10 | 33.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 15 | 28.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 20 | 23.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 4 | 30 | 13.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBGW-16 | 3/8/2019 | 6 | 10 | 42 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 6 | 15 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 6 | 20 | 32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 3/8/2019 | 6 | 30 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-1 | 3/5/2019 | 4 | 20 | 23.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 4 | 25 | 18.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-2 | 3/5/2019 | 4 | 10 | 33.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 4 | 20 | 23.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/5/2019 | 4 | 27.5 | 16 | -- | -- | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-3 | 3/6/2019 | 5 | 10 | 33.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 5 | 20 | 23.5 | 20 U | 50 U | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/6/2019 | 5 | 25 | 18.5 | -- | -- | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-4 | 3/7/2019 | 5 | 2.5 | 44.5 | -- | -- | | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 5 | 10 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 5 | 15 | 32 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 5 | 17 | 30 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 5 | 18 | 29 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-5 | 3/7/2019 | 3 | 10 | 37 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 15 | 32 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 17.5 | 29.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 20 | 27 | -- | -- | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/7/2019 | 3 | 25 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-6 | 3/8/2019 | 8 | 7.5 | 44.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 10 | 42 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 12.5 | 39.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 15 | 37 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 17.5 | 34.5 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 20 | 32 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 25 | 27 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 30 | 22 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MBPP-7 | 3/8/2019 | 8 | 5 | 47 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 15 | 37 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 8 | 23 | 29 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |

## Table 9 - Analytical Results for Detected Organics in Soil Samples



| Sample Location | Sampling Date | AOC | Depth in Feet | Sample Elevation | NWTPH in mg/kg | | | Total cPAHs TEQ in µg/kg | Volatiles in mg/kg | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | DRO | HRO | GRO | | cis-1,2-Dichloro-ethene | Trichloro-ethene | Toluene | Tetrachloro-ethene | Ethyl-benzene | Xylenes | Isopropyl-benzene | n-Propyl-benzene | 1,3,5-Trimethyl-benzene | tert-Butyl-benzene | 1,2,4-Trimethyl-benzene | sec-Butyl-benzene | Isopropyl-toluene | n-Butyl-benzene |
| MBPP-8 | 3/8/2019 | 7 | 10 | 44 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 7 | 15 | 39 | 20 U | **150** | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 7 | 22.5 | 31.5 | -- | -- | -- | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| | 3/8/2019 | 7 | 30 | 24 | 20 U | 50 U | 5 U | -- | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U | 0.05 U |
| MTCA Cleanup Levels | | | | | 2000 | 2000 | 30/100* | 0.1 | 0.078 | 0.03 | 7 | 0.05 | 6 | 9 | -- | -- | -- | -- | -- | -- | -- | -- |

U = Not detected at detection limit indicated.
NC = Not calculated.
-- = Not analyzed for this constituent.
* 30 when benzene present/100 without benzene.
Concentrations that exceed cleanup level are shaded.
Detected concentrations are bolded.
AOC = Area of concern, DRO = Diesel Range Organics, HRO = Heavy Oil Range Organics, GRO = Gasoline Range Organics

## Table 10 - Analytical Results for Detected Metals in Soil Samples

| Sample Location | AOC | Sampling Date | Depth in Feet | Metals in mg/kg | | | |
|---|---|---|---|---|---|---|---|
| | | | | Arsenic | Barium | Chromium | Lead |
| DGW-1 | 1 | 03/06/2019 | 10 | 11 U | **47** | **34** | 5.8 U |
| | 1 | 03/06/2019 | 25 | 11 U | **28** | **29** | 5.5 U |
| DGW-2 | 1 | 03/04/2019 | 10 | 11 U | **44** | **37** | 5.5 U |
| DGW-3 | 1 | 03/06/2019 | 2.5 | 11 U | **38** | **25** | 5.5 U |
| | 1 | 03/06/2019 | 12.5 | 11 U | **43** | **30** | 5.6 U |
| | 1 | 03/06/2019 | 25 | 11 U | **30** | **23** | 5.5 U |
| DGW-4 | 1 | 03/04/2019 | 5 | 12 U | **45** | **34** | 5.8 U |
| | 1 | 03/04/2019 | 15 | 11 U | **58** | **47** | **27** |
| | 1 | 03/04/2019 | 20 | 11 U | **36** | **22** | 5.3 U |
| | 1 | 03/04/2019 | 35 | 12 U | **89** | **67** | 6 U |
| DMW-1S | 1 | 03/23/2019 | 10 | 12 U | **51** | **31** | 5.8 U |
| | 1 | 03/23/2019 | 15 | 11 U | **32** | **23** | 5.4 U |
| | 1 | 03/23/2019 | 20 | 11 U | **53** | **35** | 5.5 U |
| DPP-1 | 1 | 03/04/2019 | 10 | 11 U | **31** | **25** | 5.3 U |
| | 1 | 03/04/2019 | 20 | 11 U | **36** | **27** | 5.4 U |
| DPP-2 | 1 | 03/04/2019 | 5 | 12 U | **71** | **43** | 6 U |
| | 1 | 03/04/2019 | 10 | 11 U | **54** | **34** | 5.4 U |
| DPP-3 | 1 | 03/05/2019 | 10 | 11 U | **48** | **29** | 5.5 U |
| | 1 | 03/05/2019 | 25 | 11 U | **35** | **22** | 5.7 U |
| DPP-4 | 1 | 03/04/2019 | 12.5 | 11 U | **34** | **24** | 5.4 U |
| | 1 | 03/04/2019 | 20 | 12 U | **46** | **31** | 6 U |
| DPP-5 | 1 | 03/04/2019 | 10 | 11 U | **36** | **40** | 5.7 U |
| | 1 | 03/04/2019 | 17.5 | 11 U | **43** | **34** | 5.6 U |
| DPP-6 | 1 | 03/05/2019 | 7.5 | 11 U | **36** | **25** | 5.5 U |
| | 1 | 03/05/2019 | 12.5 | 11 U | **32** | **22** | 5.4 U |
| | 1 | 03/05/2019 | 17.5 | 11 U | **42** | **26** | 5.5 U |
| HMW-2IB | 9 | 03/12/2019 | 7.5 | 11 U | **72** | **33** | **10** |
| HMW-3IA | 2 | 03/15/2019 | 22.5 | 12 U | **50** | **39** | 5.9 U |
| MBGW-1 | 4 | 03/06/2019 | 5 | 11 U | **49** | **25** | **43** |
| | 4 | 03/06/2019 | 17.5 | 11 U | **45** | **43** | 5.7 U |
| MBGW-2 | 4 | 03/04/2019 | 12.5 | 10 U | **47** | **24** | **8.5** |
| | 4 | 03/04/2019 | 25 | 14 U | **130** | **34** | **23** |
| | 4 | 03/04/2019 | 30 | 12 U | **46** | **42** | 6.1 U |
| MBGW-3 | 3 | 03/07/2019 | 7.5 | 11 U | **43** | **32** | 5.4 U |
| | 3 | 03/07/2019 | 12.5 | 11 U | **61** | **40** | 5.5 U |
| | 3 | 03/07/2019 | 25 | 12 U | **42** | **33** | 6.2 U |
| MBGW-4 | 3 | 03/06/2019 | 2.5 | 11 U | **50** | **32** | 5.6 U |
| | 3 | 03/06/2019 | 5 | 12 U | **65** | **22** | **12** |
| | 3 | 03/06/2019 | 7.5 | 11 U | **46** | **26** | 5.4 U |
| | 3 | 03/06/2019 | 25 | 12 U | **54** | **36** | 6 U |
| MBGW-5 | 8 | 03/11/2019 | 27.5 | 11 U | **39** | **25** | 5.6 U |
| MBGW-6 | 2 | 03/14/2019 | 10 | 11 U | **32** | **21** | 5.4 U |
| MBGW-7 | 8 | 03/06/2019 | 10 | 11 U | **33** | **21** | 5.4 U |
| | 8 | 03/06/2019 | 17.5 | 11 U | **37** | **34** | 5.3 U |
| | 8 | 03/06/2019 | 40 | 11 U | **42** | **36** | 5.6 U |
| MBGW-8 | 5 | 03/15/2019 | 25 | 11 U | **40** | **36** | 5.5 U |
| MBGW-9 | 6 | 03/13/2019 | 10 | 11 U | **43** | **42** | 5.3 U |
| MBGW-10 | 6 | 03/13/2019 | 10 | 11 U | **48** | **44** | 5.4 U |
| MBGW-11 | 6 | 03/12/2019 | 5 | 11 U | **68** | **38** | **10** |
| MBGW-12 | 2 | 03/15/2019 | 5 | 11 U | **56** | **42** | 5.7 U |
| MBGW-15 | 4 | 03/08/2019 | 20 | 13 U | **170** | **18** | 6.6 U |
| MBPP-1 | 4 | 03/05/2019 | 7.5 | 11 U | **81** | **46** | **93** |
| MBPP-2 | 4 | 03/05/2019 | 10 | 12 U | **100** | **45** | **21** |
| MBPP-3 | 5 | 03/06/2019 | 25 | 11 U | **35** | **26** | 5.5 U |
| MBPP-4 | 5 | 03/07/2019 | 10 | 11 U | **48** | **29** | **5.6** |
| MBPP-5 | 3 | 03/07/2019 | 25 | 11 U | **49** | **34** | 5.6 U |
| MBPP-7 | 8 | 03/08/2019 | 5 | 12 U | **200** | **38** | **6.6** |
| MBPP-8 | 7 | 03/08/2019 | 15 | **16** | **80** | **30** | **16** |
| MTCA Cleanup Levels | | | | 20 | 1600 | 2000 * | 250 |

U = Not detected at detection limit indicated.
Cadmium, Mercury, Selenium, and Silver were not detected in any of the samples analyzed for metals.
Detected concentrations are bolded.
* 19 mg/kg as Chromium VI/2000 mg/kg as Chromium III.
AOC = Area of concern.

## Table 11 - Summary of Historical Soil Analytical Data



| | | | | | TPH in mg/kg | | | Volatiles in mg/kg | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
| B-43-2 | 03/12/2012 | GEO | 10 | | 46.5 U | 18.5 U | 4.33 U | 0.0173 U | 0.13 U | 0.0433 U | 0.13 U | | | | | |
| B-43-3 | 03/13/2012 | GEO | 5 | | 4.59 U | 18.8 U | 46.9 U | 0.0183 U | 0.138 U | 0.0459 U | 0.138 U | | | | | |
| | 03/13/2012 | GEO | 30 | | 6.06 U | 23.3 U | 58.1 U | 0.0242 U | 0.182 U | 0.606 U | 0.182 U | | | | | |
| B-212 | 09/08/2017 | PES | 15 | 43 | 0.977 U | | | 0.000311 U | 0.0005 U | 0.000342 U | 0.000804 U | 0.000318 U | 0.000321 U | 0.00 UJ | 0.000304 U | 0.000335 U |
| | 09/08/2017 | PES | 21 | 37 | 63 q | | | 0.000346 J | 0.000649 J | 0.00103 J | 0.0131 | 0.00049 J | 0.00029 U | 0.00 UJ | 0.000274 U | 0.000302 U |
| | 09/08/2017 | PES | 35 | 23 | 1.98 U | | | 0.000294 U | 0.000473 U | 0.000324 U | 0.000761 U | 0.000955 J | 0.000304 U | 0.00 UJ | 0.000288 U | 0.000317 U |
| | 09/08/2017 | PES | 45 | 13 | 2.81 J | | | 0.000303 J | 0.000454 U | 0.000311 U | 0.00073 U | 0.000289 U | 0.000292 U | 0.00 UJ | 0.000276 U | 0.000304 U |
| | 09/08/2017 | PES | 45 (dup) | 13 | 1.16 U | | | 0.00807 U | 0.0129 U | 0.00887 U | 0.0208 U | 0.00825 U | 0.00834 U | 0.01 U | 0.00789 U | 0.0087 U |
| | 09/08/2017 | PES | 55 | 3 | 3.4 J | | | 0.000305 U | 0.00049 U | 0.000335 U | 0.000787 U | 0.000311 U | 0.000315 U | 0.00 UJ | 0.000298 U | 0.000328 U |
| | 09/08/2017 | PES | 65 | -7 | 1.29 U | | | 0.000313 U | 0.000504 U | 0.000345 U | 0.00081 U | 0.00032 U | 0.000324 U | 0.00 U | 0.000306 U | 0.000338 U |
| | 09/08/2017 | PES | 75 | -17 | 1.05 U | | | 0.000314 U | 0.000505 U | 0.000345 U | 0.000812 U | 0.000321 U | 0.000324 U | 0.00 U | 0.000307 U | 0.000338 U |
| | 09/11/2017 | PES | 85 | -27 | 0.0385 U | | | 0.000306 U | 0.000492 U | 0.000337 U | 0.000792 U | 0.000313 U | 0.000317 U | 0.00 U | 0.0003 U | 0.00033 U |
| | 09/11/2017 | PES | 95 | -37 | 0.0422 U | | | 0.000354 U | 0.000568 U | 0.000389 U | 0.000913 U | 0.000361 U | 0.000365 U | 0.00 U | 0.000345 U | 0.000381 U |
| | 09/11/2017 | PES | 100 | -42 | 0.0409 U | | | 0.000326 U | 0.000524 U | 0.000358 U | 0.000842 U | 0.000333 U | 0.000337 U | 0.00 U | 0.000319 U | 0.000351 U |
| B-213 | 09/05/2017 | PES | 15 | 42 | | | | 0.000313 U | 0.000503 U | 0.000344 U | 0.000809 U | 0.00289 | 0.000323 U | 0.00 U | 0.000306 U | 0.000337 U |
| | 09/05/2017 | PES | 22 | 35 | | | | 0.000385 J | 0.00054 J | 0.000991 J | 0.0126 J | 0.00263 | 0.000291 U | 0.00 U | 0.000275 U | 0.000303 U |
| | 09/05/2017 | PES | 35 | 22 | | | | 0.000292 U | 0.00047 U | 0.000322 U | 0.000756 U | 0.000299 U | 0.000302 U | 0.00 U | 0.000286 U | 0.000315 U |
| | 09/05/2017 | PES | 45 | 12 | | | | 0.000299 U | 0.000481 U | 0.000329 U | 0.000774 U | 0.000306 U | 0.000309 U | 0.00 U | 0.000293 U | 0.000323 U |
| | 09/05/2017 | PES | 55 | 2 | | | | 0.000294 U | 0.000472 U | 0.000323 U | 0.00076 U | 0.0003 U | 0.000304 U | 0.00 U | 0.000287 U | 0.000317 U |
| | 09/05/2017 | PES | 65 | -8 | | | | 0.000297 U | 0.000478 U | 0.000327 U | 0.000768 U | 0.000304 U | 0.000307 U | 0.00 U | 0.00029 U | 0.00032 U |
| | 09/05/2017 | PES | 75 | -18 | | | | 0.000295 U | 0.000474 U | 0.000325 U | 0.000763 U | 0.000302 U | 0.000305 U | 0.00 U | 0.000289 U | 0.000318 U |
| | 09/05/2017 | PES | 85 | -28 | | | | 0.000329 U | 0.000529 U | 0.000362 U | 0.000851 U | 0.000336 U | 0.00034 U | 0.00 U | 0.000322 U | 0.000355 U |
| | 09/06/2017 | PES | 95 | -38 | | | | 0.000334 U | 0.000536 U | 0.000367 U | 0.000862 U | 0.000341 U | 0.000345 U | 0.00 U | 0.000326 U | 0.000359 U |
| | 09/06/2017 | PES | 105 | -48 | | | | 0.00031 U | 0.000499 U | 0.000341 U | 0.000802 U | 0.000317 U | 0.000321 U | 0.00 U | 0.000303 U | 0.000334 U |
| | 09/06/2017 | PES | 105 (dup) | -48 | | | | 0.00031 U | 0.000498 U | 0.000341 U | 0.000801 U | 0.000317 U | 0.00032 U | 0.00 U | 0.000303 U | 0.000334 U |
| | 09/06/2017 | PES | 115 | -58 | | | | 0.000331 U | 0.000532 U | 0.000364 U | 0.000856 U | 0.000338 U | 0.000342 U | 0.00 U | 0.000324 U | 0.000357 U |
| | 09/06/2017 | PES | 125 | -68 | | | | 0.0004 U | 0.000642 U | 0.00044 U | 0.00103 U | 0.000408 U | 0.000413 U | 0.00 U | 0.000391 U | 0.000431 U |
| B-214 | 09/07/2017 | PES | 15 | 42 | | | | 0.00029 U | 0.000465 U | 0.000318 U | 0.000748 U | 0.000296 U | 0.000299 U | 0.00 UJ | 0.000283 U | 0.000312 U |
| | 09/07/2017 | PES | 25 | 32 | | | | 0.000285 U | 0.000459 U | 0.000314 U | 0.000738 U | 0.000292 U | 0.000295 U | 0.00 UJ | 0.000279 U | 0.000308 U |
| | 09/07/2017 | PES | 35 | 22 | | | | 0.000293 U | 0.000471 U | 0.000322 U | 0.000758 U | 0.0003 U | 0.000303 U | 0.00 UJ | 0.000287 U | 0.000316 U |
| | 09/07/2017 | PES | 45 | 12 | | | | 0.000287 U | 0.000462 U | 0.000316 U | 0.000743 U | 0.000294 U | 0.000297 U | 0.00 UJ | 0.000281 U | 0.00031 U |
| | 09/07/2017 | PES | 55 | 2 | | | | 0.000343 J | 0.000482 U | 0.00033 U | 0.000775 U | 0.000306 U | 0.00031 U | 0.00 UJ | 0.000293 U | 0.000323 U |
| | 09/07/2017 | PES | 65 | -8 | | | | 0.000347 U | 0.000559 U | 0.000382 U | 0.000898 U | 0.000355 U | 0.000359 U | 0.00 U | 0.00034 U | 0.000375 U |
| | 09/07/2017 | PES | 75 | -18 | | | | 0.0003 U | 0.000482 U | 0.00033 U | 0.000775 U | 0.000307 U | 0.00031 U | 0.00 U | 0.000293 U | 0.000323 U |
| | 09/07/2017 | PES | 85 | -28 | | | | 0.000325 U | 0.000522 U | 0.000357 U | 0.000839 U | 0.000332 U | 0.000335 U | 0.00 U | 0.000317 U | 0.00035 U |
| | 09/07/2017 | PES | 85 (dup) | -28 | | | | 0.000302 U | 0.000485 U | 0.000332 U | 0.00078 U | 0.000309 U | 0.000312 U | 0.00 U | 0.000295 U | 0.000325 U |
| | 09/07/2017 | PES | 95 | -38 | | | | 0.000296 U | 0.000476 U | 0.000326 U | 0.000766 U | 0.000303 U | 0.000306 U | 0.00 U | 0.00029 U | 0.000319 U |
| | 09/07/2017 | PES | 105 | -48 | | | | 0.000342 U | 0.000549 U | 0.000376 U | 0.000883 U | 0.000349 U | 0.000353 U | 0.00 U | 0.000334 U | 0.000368 U |
| | 09/11/2017 | PES | 115 | -58 | | | | 0.000329 U | 0.000529 U | 0.000362 U | 0.000851 U | 0.000337 U | 0.00034 U | 0.00 U | 0.000322 U | 0.000355 U |
| | 09/11/2017 | PES | 120 | -63 | | | | 0.000319 U | 0.000513 U | 0.000351 U | 0.000824 U | 0.000326 U | 0.000329 U | 0.00 U | 0.000312 U | 0.000344 U |
| B-215 | 09/12/2017 | PES | 15 | 39 | | | | 0.000293 U | 0.000471 U | 0.000322 U | 0.000757 U | 0.000299 U | 0.000303 U | 0.00 U | 0.000286 U | 0.000316 U |
| | 09/12/2017 | PES | 25 | 29 | | | | 0.000289 U | 0.000464 U | 0.000318 U | 0.000747 U | 0.0048 | 0.000299 U | 0.00 U | 0.000283 U | 0.000311 U |
| | 09/12/2017 | PES | 35 | 19 | | | | 0.000318 U | 0.000512 U | 0.00035 U | 0.000823 U | 0.0277 | 0.00195 | 0.06 | 0.000311 U | 0.000343 U |
| | 09/12/2017 | PES | 45 | 9 | | | | 0.000287 U | 0.000462 U | 0.000316 U | 0.000743 U | 0.000294 U | 0.000297 U | 0.00 U | 0.000281 U | 0.00031 U |
| | 09/12/2017 | PES | 55 | -1 | | | | 0.000299 U | 0.000481 U | 0.000329 U | 0.000773 U | 0.000306 U | 0.000309 U | 0.00 U | 0.000292 U | 0.000322 U |
| | 09/12/2017 | PES | 65 | -11 | | | | 0.00772 U | 0.0124 U | 0.00849 U | 0.0199 U | 11.1 | 1.02 | 1.55 | 0.00755 U | 0.00833 U |
| | 09/12/2017 | PES | 75 | -21 | | | | 0.000298 U | 0.000479 U | 0.000328 U | 0.00077 U | 0.000304 U | 0.000308 U | 0.00 U | 0.000291 U | 0.000321 U |
| | 09/13/2017 | PES | 85 | -31 | | | | 0.000325 U | 0.000523 U | 0.000358 U | 0.000841 U | 0.000333 U | 0.000336 U | 0.00 U | 0.000318 U | 0.000351 U |
| | 09/13/2017 | PES | 85 (dup) | -31 | | | | 0.000303 U | 0.000486 U | 0.000333 U | 0.000782 U | 0.000309 U | 0.000313 U | 0.00 U | 0.000296 U | 0.000326 U |
| | 09/13/2017 | PES | 95 | -41 | | | | 0.000323 U | 0.000519 U | 0.000355 U | 0.000835 U | 0.00033 U | 0.000334 U | 0.00 U | 0.000316 U | 0.000348 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-217 | 09/05/2017 | PES | 15 | 37 | | | | 0.000306 U | 0.000493 U | 0.000337 U | 0.000792 U | 0.0221 | 0.000317 U | 0.00 U | 0.0003 U | 0.00033 U |
| | 09/05/2017 | PES | 25 | 27 | | | | 0.000299 U | 0.000481 U | 0.000329 U | 0.000774 U | 0.0432 | 0.00122 | 0.00 J | 0.000293 U | 0.000323 U |
| | 09/05/2017 | PES | 35 | 17 | | | | 0.00031 U | 0.000498 U | 0.000341 U | 0.000801 U | 0.000317 U | 0.00032 U | 0.00 U | 0.000303 U | 0.000334 U |
| | 09/05/2017 | PES | 42 | 10 | | | | 0.000309 U | 0.000702 J | 0.00034 U | 0.000798 U | 152 | 0.15 | 5.73 | 0.00334 | 0.464 J |
| | 09/05/2017 | PES | 55 | -3 | | | | 0.000313 U | 0.000504 U | 0.000345 U | ..000810 U | 0.00032 U | 0.000324 U | 0.08 | 0.000306 U | 0.00462 |
| | 09/05/2017 | PES | 65 | -13 | | | | 0.00031 U | 0.0005 U | 0.000342 U | 0.000804 U | 0.0255 | 0.00178 | 3.14 | 0.000366 J | 0.00259 U |
| | 09/05/2017 | PES | 75 | -23 | | | | 0.000323 U | 0.00052 U | 0.000356 U | 0.000836 U | 0.000331 U | 0.000334 U | 0.00 U | 0.000316 U | 0.000349 U |
| | 09/06/2017 | PES | 85 | -33 | | | | 0.000308 U | 0.000494 U | 0.000338 U | 0.000795 U | 0.000314 U | 0.000318 U | 0.00 U | 0.000301 U | 0.000332 U |
| | 09/06/2017 | PES | 95 | -43 | | | | 0.000326 U | 0.000525 U | 0.000359 U | 0.000844 U | 0.00111 J | 0.000337 U | 0.00 U | 0.000319 U | 0.000352 U |
| | 09/06/2017 | PES | 106 | -54 | | | | 0.0331 U | 0.0532 U | 0.0364 U | 0.0855 U | 5.18 | 0.704 | 0.03 U | 0.0324 U | 0.0357 U |
| | 09/06/2017 | PES | 115 | -63 | | | | 0.000312 U | 0.000501 U | 0.000343 U | 0.000806 U | 0.000319 U | 0.000322 U | 0.00 U | 0.000305 U | 0.000336 U |
| BB-5 | 03/09/1997 | B&V | 15 | 34 | 22 U | 54 U | 108 U | ND | ND | ND | ND | | | | | |
| | 03/09/1997 | B&V | 25 | 24 | 22 U | 56 U | 112 U | | | | | | | | | |
| BB-7 | 04/06/1997 | B&V | 10-12 | 17 | 26 U | 66 U | 132 U | | | | | | | | | |
| BB-8 | 06/06/1997 | B&V | 20 | 23.6 | 20 U | 50 U | 100 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BB-10 | 08/29/1997 | B&V | 15 | 42.0 | 27 U | 54 U | 109 U | | | | | | | | | |
| BB-12 | 03/18/1998 | B&V | 15-16.5 | 18.8 | 29 U | 58 U | 120 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 03/18/1998 | B&V | 45-46.5 | -11.2 | 29 U | 58 U | 120 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BB-13 | 03/19/1998 | B&V | 25-27.5 | 1.9 | 34 U | 68 U | 140 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 03/19/1998 | B&V | 40-41.5 | -13.1 | 30 U | 61 U | 120 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BB-14 | 03/03/1998 | B&V | 12.5-14 | 21.3 | 31 U | 62 U | 120 U | | | | | | | | | |
| | 03/03/1998 | B&V | 22.5-24 | 21.3 | 31 U | 62 U | 120 U | | | | | | | | | |
| | 03/03/1998 | B&V | 30-31.5 | 21.3 | 27 U | 54 | 120 U | | | | | | | | | |
| | 03/03/1998 | B&V | 5-6.5 | 21.3 | 32 U | 64 U | 130 U | | | | | | | | | |
| CHB-07 | 04/14/2005 | CH2M | 12.5-13.5 | 16.5 | 7.2 U | 6.5 U | 13 U | 0.0015 | 0.0011 U | 0.0011 U | 0.0022 U | 0.0011 U | 0.0011 U | 1.10 | 0.0083 | 0.027 |
| | 04/14/2008 | CH2M | 5-7 | 23.5 | 5 U | 5.9 U | 12 U | | | | | | | | | |
| CHB-08 | 04/15/2008 | CH2M | 15-16 | 16 .3 | 5.6 U | 5.9 U | 12 U | 0.0008 U | 0.0008 U | 0.0008 U | 0.0016 U | 0.0008 U | 0.0008 U | 0.00 U | 0.0008 U | 0.0008 U |
| CHB-09 | 04/16/2008 | CH2M | 20 | 17.5 | 6.5 U | 11 | 23 | | | | | | | | | |
| | 04/16/2008 | CH2M | 25 | 12.5 | 6.1 U | 36 | 130 | 0.0012 U | 0.0012 U | 0.0012 U | 0.0024 U | 0.0012 U | 0.0012 U | 0.0012 U | 0.0012 U | 0.0012 U |
| MW102 (B102) | 07/17/2012 | SES | 20 | 29.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/17/2012 | SES | 30 | 19.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/17/2012 | SES | 38 | 11.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/17/2012 | SES | 40 | 9.5 | | | | | | | | | | | | |
| | 07/17/2012 | SES | 49 | 0.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/17/2012 | SES | 60 | -10.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/18/2012 | SES | 70 | -20.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/19/2012 | SES | 80 | -30.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/19/2012 | SES | 90 | -40.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/20/2012 | SES | 100 | -50.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/20/2012 | SES | 110 | -60.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/23/2012 | SES | 120 | -70.5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW103 (B103) | 07/25/2012 | SES | 10 | 29.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/25/2012 | SES | 18 | 21.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/25/2012 | SES | 30 | 9.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/25/2012 | SES | 40 | -0.2 | | | | | | | | 4.6 | 0.77 | 0.12 | 0.05 U | 0.05 U |
| | 07/25/2012 | SES | 45 | -5.2 | | | | | | | | 5.3 | 0.48 | 0.24 | 0.05 U | 0.05 U |
| | 07/25/2012 | SES | 55 | -15.2 | | | | | | | | 0.025 U | 0.03 U | 0.18 | 0.05 U | 0.05 U |
| | 07/26/2012 | SES | 62.5 | -22.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/26/2012 | SES | 75 | -35.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/26/2012 | SES | 83 | -43.2 | | | | | | | | 0.025 U | 0.03 U | 0.12 | 0.05 U | 0.05 U |
| | 07/26/2012 | SES | 95 | -55.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/27/2012 | SES | 105 | -65.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/27/2012 | SES | 113 | -73.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW104 (B104) | 07/30/2012 | SES | 10 | 33.1 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/30/2012 | SES | 20 | 23.1 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/30/2012 | SES | 30 | 13.1 | | | | | | | | 1.8 U | 0.86 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/30/2012 | SES | 35 | 8.1 | | | | | | | | 7.1 U | 0.23 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/30/2012 | SES | 50 | -6.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/31/2012 | SES | 60 | -16.9 | | | | | | | | 2.1 U | 0.21 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/31/2012 | SES | 69 | -25.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/31/2012 | SES | 80 | -36.9 | | | | | | | | 0.12 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/01/2012 | SES | 90 | -46.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/01/2012 | SES | 100 | -56.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/01/2012 | SES | 110 | -66.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/01/2012 | SES | 120 | -76.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/01/2012 | SES | 130 | -86.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW105 (B105) | 08/06/2012 | SES | 10 | 35 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/06/2012 | SES | 20 | 25 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/06/2012 | SES | 30 | 1 | 5 | | | | | | | 1.3 | 0.16 | 0.086 | 0.05 U | 0.05 U |
| | 08/08/2012 | SES | 40 | 5 | | | | | | | | 0.025 U | 0.03 U | 0.22 | 0.05 U | 0.05 U |
| | 08/08/2012 | SES | 50 | -5 | | | | | | | | 0.18 | 0.040 | 0.05 U | 0.05 U | 0.05 U |
| | 08/09/2012 | SES | 60 | -15 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/09/2012 | SES | 70 | -25 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/09/2012 | SES | 80 | -35 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 90 | -45 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 100 | -55 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 110 | -65 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 120 | -75 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 130 | -85 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/10/2012 | SES | 138 | -93 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW106 (B106) | 08/14/2012 | SES | 10 | 42.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/14/2012 | SES | 20 | 32.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/14/2012 | SES | 30 | 22.4 | | | | | | | | 0.038 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/14/2012 | SES | 40 | 12.4 | | | | | | | | 3.1 | 0.15 | 0.05 U | 0.05 U | 0.05 U |
| | 08/14/2012 | SES | 50 | 2.4 | | | | | | | | 0.73 | 0.17 | 0.11 | 0.05 U | 0.05 U |
| | 08/14/2012 | SES | 60 | -7.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 70 | -17.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 80 | -27.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 90 | -37.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 100 | -47.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 110 | -57.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 120 | -67.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 130 | -77.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 08/15/2012 | SES | 140 | -87.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW107 (B107) | 03/12/2012 | SES | 5 | 39.2 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/2012 | SES | 15 | 29.2 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/12/2012 | SES | 25 | 19.2 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.6 | 0.063 | 0.06 | 0.05 U | 0.05 U |
| | 03/12/2012 | SES | 35 | 9.2 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 19 | 0.59 | 0.37 | 0.05 U | 0.05 U |
| | 03/12/2012 | SES | 45 | -0.8 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.028 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW108 (B108) | 12/14/2012 | SES | 15 | 18.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/14/2012 | SES | 25 | 8.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/14/2012 | SES | 35 | -1.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/14/2012 | SES | 45 | -11.9 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/14/2012 | SES | 50 | -16.9 | | | | | | | | 0.037 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW109 (B109) | 04/12/2012 | SES | 5 | 30.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 15 | 20.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 25 | 10.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 35 | 0.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 45 | -9.3 | | | | | | | | 1.6 | 0.94 | 0.15 | 0.05 U | 0.05 U |
| MW110 (B110) | 04/12/2012 | SES | 15 | 25 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 25 | 15 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 35 | 5 | | | | | | | | 3.4 | 0.21 | 0.31 | 0.05 U | 0.05 U |
| | 04/12/2012 | SES | 45 | -5 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW111 (B111) | 05/12/2012 | SES | 20 | 16.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 05/12/2012 | SES | 30 | 6.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 05/12/2012 | SES | 38 | -1.2 | | | | | | | | 0.078 | 0.4 | 0.28 | 0.05 U | 0.05 U |
| | 05/12/2012 | SES | 50 | -13.2 | | | | | | | | 1.4 | 0.56 | 0.11 | 0.05 U | 0.05 U |
| | 06/12/2012 | SES | 60 | -23.2 | | | | | | | | 0.085 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 06/12/2012 | SES | 70 | -33.2 | | | | | | | | 0.033 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 06/12/2012 | SES | 80 | -43.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW112 (B112) | 12/11/2012 | SES | 10 | 47.45 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 20 | 37 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 30 | 27 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 40 | 17 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 50 | 7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 60 | -3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/11/2012 | SES | 75 | -18 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/12/2012 | SES | 85 | -28 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW113 (B113) | 12/18/2012 | SES | 10 | 23.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/18/2012 | SES | 20 | 13.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/18/2012 | SES | 30 | 3.2 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/18/2012 | SES | 40 | -6.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/18/2012 | SES | 50 | -16.8 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW114 (B114) | 10/12/2012 | SES | 15 | 31.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 10/12/2012 | SES | 25 | 21.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 10/12/2012 | SES | 35 | 11.4 | | | | | | | | 8.8 | 0.45 | 0.11 | 0.05 U | 0.05 U |
| | 10/12/2012 | SES | 40 | 6.4 | | | | | | | | 0.59 | 0.071 | 0.05 U | 0.05 U | 0.05 U |
| | 10/12/2012 | SES | 45 | 1.4 | | | | | | | | 0.25 | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW115 (B115) | 12/13/2012 | SES | 10 | 24.5 | | | | | | | | 0.03 U | 0.030 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/13/2012 | SES | 15 | 19.35 | | | | | | | | 0.03 U | 0.030 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/13/2012 | SES | 25 | 9.5 | | | | | | | | 0.03 U | 0.030 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/13/2012 | SES | 35 | -0.5 | | | | | | | | 0.03 U | 0.030 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/13/2012 | SES | 45 | -10.5 | | | | | | | | 0.03 U | 0.030 U | 0.05 U | 0.05 U | 0.05 U |
| MW116 (B116) | 07/12/2012 | SES | 15 | 17 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/12/2012 | SES | 25 | 7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/12/2012 | SES | 35 | -3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 07/12/2012 | SES | 45 | -13 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW117 (B117) | 02/04/2013 | SES | 10 | 47.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 02/04/2013 | SES | 20 | 37.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 02/04/2013 | SES | 30 | 27.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 02/04/2013 | SES | 40 | 17.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 02/04/2013 | SES | 50 | 7.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW118 (B118) | 03/21/2013 | SES | 10 | 43.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 20 | 33.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 30 | 23.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 40 | 13.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 50 | 3.4 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW119 (B119) | 03/21/2013 | SES | 10 | 27.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 20 | 17.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 30 | 7.7 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/21/2013 | SES | 40 | -2.3 | | | | | | | | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW120 (B120) | 12/16/2013 | SES | 20 | 20 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/16/2013 | SES | 30 | 10 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/16/2013 | SES | 45 | -5 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW121 (B121) | 12/16/2013 | SES | 15 | 27 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/16/2013 | SES | 25 | 17 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW122 (B122) | 12/17/2013 | SES | 15 | 15 | | | | 0.053 | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 24 | 6 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 40 | -10 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.22 | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 45 | -15 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 50 | -20 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 60 | -30 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 70 | -40 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 80 | -50 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/17/2013 | SES | 100 | -70 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW123 (B123) | 12/18/2013 | SES | 20 | 8 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW124 (B124) | 12/19/2013 | SES | 10 | 46 | 2 U | | | | | | | | | | | |
| | 12/19/2013 | SES | 20 | 36 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 30 | 26 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 40 | 16 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 50 | 6 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 60 | -4 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 70 | -14 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 80 | -24 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 90 | -34 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 100 | -44 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 110 | -54 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/19/2013 | SES | 120 | -64 | | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW125 (B125) | 12/20/2013 | SES | 15 | 29 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/20/2013 | SES | 20 | 24 | 2 U | | | 0.3 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/20/2013 | SES | 25 | 19 | 2 U | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/20/2013 | SES | 30 | 14 | | | | | | | | | | | | |
| MW126 (B126) | 12/30/2013 | SES | 20 | 11 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/30/2013 | SES | 35 | -4 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/30/2013 | SES | 45 | -14 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/30/2013 | SES | 55 | -24 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/31/2013 | SES | 60 | -29 | | | | | | | | | | | | |
| | 01/01/2014 | SES | 65 | -34 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 01/02/2014 | SES | 75 | -44 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 01/03/2014 | SES | 80 | -49 | | | | | | | | | | | | |
| | 01/04/2014 | SES | 85 | -54 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 01/05/2014 | SES | 95 | -64 | | | | | | | | | | | | |
| MW127 (B127) | 12/31/2013 | SES | 15 | 24 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/31/2013 | SES | 25 | 14 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/31/2013 | SES | 40 | -1 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 12/31/2013 | SES | 45 | -6 | | | | | | | | | | | | |
| | 12/31/2013 | SES | 50 | -11 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW128 (B128) | 01/09/2014 | SES | 25 | 4 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 01/09/2014 | SES | 45 | -16 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| | 01/09/2014 | SES | 65 | -36 | | | | 0.03 U | 0.05 U | 0.05 U | 0.15 U | 0.025 U | 0.03 U | 0.05 U | 0.05 U | 0.05 U |
| MW130 (B130) | 03/01/2016 | SES | 10 | 30 | | | | | | | | 0.17 | 0.04 | 0.05 U | 0.05 U | 0.05 U |
| | 03/01/2016 | SES | 20 | 20 | | | | | | | | 0.82 | 0.054 | 0.05 U | 0.05 U | 0.05 U |
| | 03/01/2016 | SES | 30 | 10 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/01/2016 | SES | 40 | 0 | | | | | | | | 0.032 | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 45 | -5 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 50 | -10 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 55 | -15 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 60 | -20 | | | | | | | | 0.086 | 0.02 U | 1.20 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 65 | -25 | | | | | | | | 1.9 | 0.079 | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 70 | -30 | | | | | | | | 37 ve | 0.44 | 0.07 | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 75 | -35 | | | | | | | | 2.9 | 0.058 | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 80 | -40 | | | | | | | | 0.059 | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| MW-131 (B131) | 03/01/2016 | SES | 10 | 30 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/01/2016 | SES | 20 | 20 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/01/2016 | SES | 30 | 10 | | | | | | | | 0.097 | 2.4 | 3.20 | 0.064 | 0.05 U |
| | 03/01/2016 | SES | 40 | 0 | | | | | | | | 0.025 U | 0.02 U | 0.05 U | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 45 | -5 | | | | | | | | 0.21 | 0.036 | 0.07 | 0.05 U | 0.05 U |
| | 03/02/2016 | SES | 55 | -15 | | | | | | | | 0.44 | 0.6 | 0.55 | 0.05 U | 0.05 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-132 | 08/22/2017 | SES | 20 | 20.1 | 0.0378 | u | | 0.000301 U | 0.000484 U | 0.000331 U | 0.000778 U | 0.000312 J | 0.00038 J | 0.01 | 0.000443 J | 0.00217 |
| | 08/22/2017 | SES | 35 | 5.1 | 0.0379 | u | | 0.000302 U | 0.000486 U | 0.000332 U | 0.000781 U | 0.00166 | 0.000312 U | 0.01 | 0.000295 U | 0.00377 UJ |
| | 08/22/2017 | SES | 50 | -9.9 | 1.97 | | | 0.000292 U | 0.00047 U | 0.000321 U | 0.000755 U | 0.109 | 0.153 | 4.62 | 0.0405 | 0.00219 |
| | 08/23/2017 | SES | 55 | -14.9 | 126 z | | | 0.031 U | 0.0499 U | 0.0342 U | 0.0803 U | 3.62 | 9.63 | 2.22 | 0.0725 J | 0.0335 U |
| | 08/23/2017 | SES | 60 | -19.9 | 0.276 | | | 0.000291 U | 0.000467 U | 0.00032 U | 0.000752 U | 0.00905 J | 4.6 | 0.09 | 0.000785 J | 0.000808 J |
| | 08/23/2017 | SES | 70 | -29.9 | 1.03 U | | | 0.000329 U | 0.000529 U | 0.000362 U | 0.000851 U | 0.00753 U | 0.00851 U | 0.00 J | 0.000322 U | 0.000355 U |
| | 08/23/2017 | SES | 83 | -42.9 | 0.925 U | | | 0.000302 J | 0.000473 U | 0.000324 U | 0.000761 U | | 0.000304 U | 0.00 J | 0.000288 U | 0.000317 U |
| MW-133 | 08/15/2017 | PES | 20 | 20 | 0.183 | | | 0.000422 J | 0.000511 U | 0.00035 U | 0.000823 U | 3.62 | 0.0688 | 0.16 | 0.000591 J | 0.000389 J |
| | 08/15/2017 | PES | 35 | 5 | 0.0443 U | | | 0.000353 U | 0.000567 U | 0.000388 U | 0.000911 U | 0.00901 U | 0.000594 J | 0.00 J | 0.000345 U | 0.00038 U |
| | 08/15/2017 | PES | 45 | -5 | 3.59 J | | | 0.000293 U | 0.000472 U | 0.000323 U | 0.000759 U | 5.17 | 0.0309 | 13.00 | 0.00508 | 0.323 |
| | 08/15/2017 | PES | 55 | -15 | 38.9 Jz | | | 0.0661 U | 0.106 U | 0.0727 U | 0.171 U | 114 | 0.988 | 4.09 | 0.0646 U | 0.0712 U |
| | 08/15/2017 | PES | 58 | -18 | 387 Jz | | | 1.6 U | 2.57 U | 1.75 U | 4.13 U | 691 | 1.66 U | 1.40 U | 1.56 U | 1.73 U |
| | 08/15/2017 | PES | 65 | -25 | 7.21 Jz | | | 0.000313 U | 0.000502 U | 0.000502 U | 0.000808 U | 36 | 2.96 | 1.41 | 0.00123 | 0.00631 |
| | 08/15/2017 | PES | 75 | -35 | 0.0394 U | | | 0.000314 U | 0.000505 U | 0.000505 U | 0.000812 U | 0.0468 J | 0.000647 J | 0.00 | 0.000307 U | 0.000339 U |
| | 08/15/2017 | PES | 85 | -45 | 1.28 J | | | 0.00791 U | 0.58 | 0.058 | 0.0204 U | 2.28 | 0.146 | 0.72 | 0.00774 U | 0.00853 U |
| | 08/16/2017 | PES | 95 | -55 | 0.0572 U | | | 0.000315 U | 0.000506 U | 0.000506 U | 0.000813 U | 0.00127 | 0.000325 U | 0.00 U | 0.000308 U | 0.000339 U |
| | 08/16/2017 | PES | 105 | -65 | 0.0849 U | | | 0.000325 U | 0.000523 U | 0.000523 U | 0.00084 U | 0.000345 J | 0.000336 U | 0.00 U | 0.000318 U | 0.00035 U |
| | 08/16/2017 | PES | 120 | -80 | 0.0964 U | | | 0.00734 U | 0.0117 U | 0.0117 U | 0.0189 U | 0.0075 U | 0.00759 U | 0.01 U | 0.00717 U | 0.00791 U |
| | 08/16/2017 | PES | 130 | -90 | 0.109 U | | | 0.000322 U | 0.000517 U | 0.000517 U | 0.000832 U | 0.0119 | 0.00354 | 0.00 J | 0.000314 U | 0.000347 U |
| | 08/16/2017 | PES | 135 | -95 | 15.3 Jw | | | 0.00369 | 0.0119 | 0.0119 | 0.392 | 0.0107 | 0.000965 J | 0.00 J | 0.000299 U | 0.00033 U |
| | 08/16/2017 | PES | 141 | -101 | 0.955 U | | | 0.000766 J | 0.000489 U | 0.000489 U | 0.000786 U | 0.000311 U | 0.000314 U | 0.00 U | 0.000297 U | 0.000328 U |
| MW-135 | 08/24/2017 | PES | 14 | 25.1 | 644 z | | | 0.0329 U | 0.166 J | 0.075 J | 0.331 J | 933 | 113 | 329.00 | 0.7 | 17 |
| | 08/24/2017 | PES | 20 | 19.1 | 0.277 | | | 0.00769 U | 0.0123 U | 0.00845 U | 0.0198 U | 1.73 | 0.461 | 0.41 | 0.00752 U | 0.0241 J |
| | 08/24/2017 | PES | 30 | 9.1 | 40.4 z | | | 0.000287 U | 0.00159 J | 0.000315 U | 0.00135 J | 109 | 2.9 | 1.98 | 0.00363 | 0.043 |
| | 08/24/2017 | PES | 36 | 3.1 | 0.733 | | | 0.000315 U | 0.000507 U | 0.000347 U | 0.000815 U | 20.1 | 0.0571 | 0.15 | 0.000907 J | 0.00962 |
| | 08/24/2017 | PES | 40 | -0.9 | 4.34 | | | 0.000322 U | 0.000518 U | 0.000354 U | 0.000832 U | 10.6 | 2.71 | 12.80 | 0.00769 | 0.405 |
| | 08/24/2017 | PES | 45 | -5.9 | 5.09 z | | | 0.000321 U | 0.000515 U | 0.000353 U | 0.000829 U | 69.7 | 3.1 | 5.35 | 0.00859 | 0.00963 |
| | 08/24/2017 | PES | 55 | -15.9 | 0.457 | | | 0.000293 U | 0.000471 U | 0.000323 U | 0.000758 U | 8.68 | 0.0673 | 0.06 | 0.000287 U | 0.00105 J |
| | 08/24/2017 | PES | 65 | -25.9 | 0.161 | | | 0.00032 U | 0.000515 U | 0.000352 U | 0.000828 U | 0.49 | 0.00881 | 0.02 | 0.000313 U | 0.000345 U |
| | 08/24/2017 | PES | 80 | -40.9 | 0.138 | | | 0.000302 U | 0.000485 U | 0.000332 U | 0.00078 U | 0.0106 | 0.000372 J | 0.00 | 0.000295 U | 0.000325 U |
| MW-136 | 08/28/2017 | PES | 35 | 16.8 | | | | 0.000284 U | 0.000457 U | 0.000313 U | 0.000735 U | 0.00777 | 0.000437 J | 0.01 | 0.000278 U | 0.000306 U |
| | 08/28/2017 | PES | 35 | 16.8 | | | | 0.000295 U | 0.000474 U | 0.000324 U | 0.000762 U | 0.00621 | 0.000324 J | 0.01 | 0.000288 U | 0.000318 U |
| | 08/28/2017 | PES | 44 | 7.8 | | | | 0.000303 U | 0.000487 U | 0.000333 U | 0.000783 U | 0.0853 UJ | 0.00255 | 0.02 | 0.000296 U | 0.000327 U |
| | 08/28/2017 | PES | 50 | 1.8 | | | | 0.000311 U | 0.000499 U | 0.0003472 U | 0.000803 U | 0.000318 U | 0.000321 U | 0.01 U | 0.00759 U | 0.000335 U |
| | 08/28/2017 | PES | 65 | -13.2 | | | | 0.000838 J | 0.000472 U | 0.000323 U | 0.000759 U | 0.0003 U | 0.000303 U | 0.00 U | 0.000287 U | 0.000316 U |
| | 08/28/2017 | PES | 75 | -23.2 | | | | 0.0003 U | 0.000482 U | 0.00033 U | 0.000775 U | 0.000307 U | 0.00031 U | 0.00 U | 0.000293 U | 0.000323 U |
| | 08/28/2017 | PES | 85 | -33.2 | | | | 0.000301 U | 0.000485 U | 0.000332 U | 0.000779 U | 0.000308 U | 0.000311 U | 0.00 U | 0.000295 U | 0.000325 U |
| | 08/28/2017 | PES | 95 | -43.2 | | | | 0.000302 U | 0.000486 U | 0.000332 U | 0.000781 U | 0.000309 U | 0.000312 U | 0.00 U | 0.000295 U | 0.000326 U |
| MW-137 | 08/31/2017 | PES | 25 | 26.7 | 0.037 U | | | 0.000294 U | 0.000473 U | 0.000324 U | 0.00174 | 0.00245 | 0.00245 | 0.00 J | 0.000288 U | 0.000317 U |
| | 08/31/2017 | PES | 45 | 6.7 | 0.0384 U | | | 0.00764 U | 0.0122 U | 0.0084 U | 0.00781 U | 0.0079 U | 0.0079 U | 0.01 J | 0.00747 U | 0.00824 U |
| | 08/31/2017 | PES | 75 | -23.3 | | | | 0.000533 J | 0.000477 U | 0.000326 U | 0.000303 U | 0.000306 U | 0.000306 U | 0.00 U | 0.00029 U | 0.000319 U |
| | 09/01/2017 | PES | 85 | -33.3 | 0.0406 U | | | 0.000324 U | 0.00052 U | 0.000356 U | 0.000331 U | 0.000334 U | 0.000334 U | 0.00 U | 0.000316 U | 0.000349 U |
| | 09/01/2017 | PES | 95 | -43.3 | 0.0363 U | | | 0.000289 U | 0.000465 U | 0.000318 U | 0.000296 U | 0.000299 U | 0.000299 U | 0.00 U | 0.000283 U | 0.000312 U |
| | 09/01/2017 | PES | 115 | -63.3 | 0.0415 U | | | 0.00033 U | 0.000531 U | 0.000363 U | 0.000338 U | 0.000341 U | 0.000341 U | 0.00 U | 0.000323 U | 0.000356 U |
| MW138 | 09/12/2017 | PES | 35 | 22 | | | | 0.00107 U | 0.00534 U | 0.00107 U | 0.00321 U | 0.00107 U | 0.00107 U | 0.00107 U | 0.00107 U | 0.00107 U |
| | 09/12/2017 | PES | 45 | 12 | | | | 0.00106 U | 0.00529 U | 0.00106 U | 0.00317 U | 0.00106 U | 0.00106 U | 0.00106 U | 0.00106 U | 0.00106 U |
| | 09/12/2017 | PES | 56 | 1 | | | | 0.00112 U | 0.00562 U | 0.00112 U | 0.00337 U | 0.00112 U | 0.00112 U | 0.00112 U | 0.00112 U | 0.00112 U |
| | 09/13/2017 | PES | 105 | -48 | | | | 0.00124 U | 0.00622 U | 0.00124 U | 0.00373 U | 0.00124 U | 0.00124 U | 0.00124 U | 0.00124 U | 0.00124 U |
| | 09/13/2017 | PES | 65 | -8 | | | | 0.00108 U | 0.00541 U | 0.00108 U | 0.00324 U | 0.00108 U | 0.00108 U | 0.00108 U | 0.00108 REJ | 0.00108 REJ |
| | 09/13/2017 | PES | 75 | -18 | | | | 0.0011 U | 0.00551 U | 0.0011 U | 0.0033 U | 0.0011 U | 0.0011 U | 0.0011 U | 0.0011 U | 0.0011 U |
| | 09/13/2017 | PES | 85 | -28 | | | | 0.0012 U | 0.00601 U | 0.0012 U | 0.00361 U | 0.0012 U | 0.0012 U | 0.0012 U | 0.0012 U | 0.0012 U |
| | 09/13/2017 | PES | 95 | -38 | | | | 0.00109 U | 0.00545 U | 0.00109 U | 0.00327 U | 0.00109 U | 0.00109 U | 0.00109 U | 0.00109 U | 0.00109 U |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-140 | 08/30/2017 | PES | 15 | 35.5 | | | | 0.000308 U | 0.000495 U | 0.000339 U | 0.000796 U | 0.000315 U | 0.000318 U | 0.000268 U | 0.000301 U | 0.000332 U |
| | 08/30/2017 | PES | 25 | 25.5 | | | | 0.000293 U | 0.000471 U | 0.000322 U | 0.000757 U | 0.147 | 0.0107 | 0.00199 | 0.000286 U | 0.000316 U |
| | 08/30/2017 | PES | 35 | 15.5 | | | | 0.00786 U | 0.0126 U | 0.00865 U | 0.0203 U | 15.1 | 0.629 | 0.387 | 0.00769 U | 0.0107 J |
| | 08/30/2017 | PES | 45 | 5.5 | | | | 0.000288 U | 0.000463 U | 0.000317 U | 0.000745 U | 4.27 | 0.0793 | 0.0431 | 0.000282 U | 0.0016 |
| | 08/30/2017 | PES | 55 | -4.5 | | | | 0.000379 J | 0.000498 J | 0.000326 U | 0.000766 U | 1.56 | 0.0496 | 0.130 | 0.0005 J | 0.0990 |
| | 08/30/2017 | PES | 65 | -14.5 | | | | 0.000289 U | 0.000465 U | 0.000318 U | 0.000747 U | 0.00746 U | 0.000299 U | 0.000252 U | 0.000283 U | 0.000312 U |
| | 08/30/2017 | PES | 75 | -24.5 | | | | 0.00728 U | 0.0116 U | 0.008 U | 0.0188 U | 0.00744 U | 0.00753 U | 0.00634 U | 0.00712 U | 0.00785 U |
| | 08/30/2017 | PES | 90 | -39.5 | | | | 0.000318 U | 0.000511 U | 0.000349 U | 0.000821 U | 0.000325 U | 0.000328 U | 0.000276 U | 0.000311 U | 0.000342 U |
| | 08/31/2017 | PES | 110 | -59.5 | | | | 0.000313 U | 0.000503 U | 0.000344 U | 0.000808 U | 0.00032 U | 0.000323 U | 0.000272 U | 0.000306 U | 0.000337 U |
| | 08/31/2017 | PES | 130 | -79.5 | | | | 0.000305 U | 0.000491 U | 0.000336 U | 0.000789 U | 0.000312 U | 0.000315 U | 0.000266 U | 0.000298 U | 0.000329 U |
| | 08/31/2017 | PES | 140 | -89.5 | | | | 0.00762 U | 0.0122 U | 0.00838 U | 0.0197 U | 0.00779 U | 0.00788 U | 0.00664 U | 0.00745 U | 0.00822 U |
| MW147 | 04/02/2018 | PES | 10 | 42 | | | | 0.000566 J | 0.00543 U | 0.00109 U | 0.00326 U | 0.000697 J | 0.00109 U | 0.00109 U | 0.00109 U | 0.00109 U |
| | 04/02/2018 | PES | 20 | | | | | 0.00108 U | 0.0054 U | 0.00108 U | 0.00324 U | 0.000759 J | 0.00108 U | 0.00108 U | 0.00108 U | 0.00108 U |
| | 04/02/2018 | PES | 30 | 22 | | | | 0.00112 U | 0.00558 U | 0.00112 U | 0.00335 U | 0.0238 | 0.0033 | 0.00239 | 0.00112 U | 0.00112 U |
| | 04/02/2018 | PES | 40 | 12 | | | | 0.0011 U | 0.00552 U | 0.0011 U | 0.00331 U | 0.0146 | 0.00118 | 0.00488 | 0.0011 U | 0.0615 |
| | 04/02/2018 | PES | 50 | 2 | | | | 0.00111 U | 0.00554 U | 0.00111 U | 0.00332 U | 0.00175 | 0.00105 J | 0.00432 | 0.00111 U | 0.00322 |
| | 04/02/2018 | PES | 60 | -8 | | | | 0.00108 U | 0.00538 U | 0.00108 U | 0.00323 U | 0.000607 J | 0.00108 U | 0.000696 J | 0.00108 U | 0.00108 U |
| | 04/02/2018 | PES | 70 | -18 | | | | 0.00112 U | 0.0056 U | 0.00112 U | 0.00336 U | 0.00112 U | 0.00112 U | 0.00112 U | 0.00112 U | 0.000502 J |
| | 04/02/2018 | PES | 80 | -28 | | | | 0.00116 U | 0.00579 U | 0.00116 U | 0.00347 U | 0.00116 U | 0.00116 U | 0.00116 U | 0.00116 U | 0.00116 U |
| MW148 | 04/09/2018 | PES | 11 | 33 | | | | 0.000728 J | 0.00577 U | 0.00115 U | 0.00346 U | 0.00115 U | 0.00115 U | 0.00115 U | 0.00115 U | 0.00115 U |
| | 04/09/2018 | PES | 20 | 24 | | | | 0.00108 U | 0.00542 U | 0.00108 U | 0.00325 U | 0.00188 | 0.00108 U | 0.00108 U | 0.00108 U | 0.00108 U |
| | 04/09/2018 | PES | 30 | 14 | | | | 0.00112 U | 0.00561 U | 0.00112 U | 0.00337 U | 0.00112 U | 0.00112 U | 0.00364 | 0.00112 U | 0.0144 |
| | 04/09/2018 | PES | 40 | 4 | | | | 0.00109 U | 0.00543 U | 0.00109 U | 0.00326 U | 0.000801 J | 0.000551 J | 0.00113 | 0.00109 U | 0.00109 U |
| | 04/09/2018 | PES | 50 | -6 | | | | 0.0011 U | 0.00551 U | 0.0011 U | 0.00331 U | 0.0011 U | 0.0011 U | 0.0011 U | 0.0011 U | 0.0011 U |
| | 04/09/2018 | PES | 60 | -16 | | | | 0.00126 U | 0.00631 U | 0.00126 U | 0.00379 U | 0.00126 U | 0.00126 U | 0.00126 U | 0.00126 U | 0.00126 U |
| | 04/09/2018 | PES | 70 | -26 | | | | 0.00126 U | 0.0063 U | 0.00126 U | 0.00378 U | 0.000618 J | 0.00126 U | 0.00038 J | 0.00126 U | 0.00126 U |
| | 04/09/2018 | PES | 80 | -36 | | | | 0.00118 U | 0.00588 U | 0.00118 U | 0.00353 U | 0.000585 J | 0.00118 U | 0.000314 J | 0.00118 U | 0.00118 U |
| MW153 | 03/27/2018 | PES | 10 | 45 | | | | 0.00113 U | 0.00567 U | 0.00113 U | 0.0034 U | 0.00113 U | 0.00113 U | 0.00113 U | 0.00113 U | 0.00113 U |
| | 03/27/2018 | PES | 20 | 35 | | | | 0.00109 U | 0.00547 U | 0.00109 U | 0.00328 U | 0.000561 J | 0.00109 U | 0.00109 U | 0.00109 U | 0.00109 U |
| | 03/27/2018 | PES | 30 | 25 | | | | 0.00107 U | 0.00536 U | 0.00107 U | 0.00322 U | 0.00107 U | 0.00107 U | 0.00107 U | 0.00107 U | 0.00107 U |
| | 03/27/2018 | PES | 40 | 15 | | | | 0.00113 U | 0.00566 U | 0.00113 U | 0.0034 U | 0.00113 U | 0.000486 J | 0.00421 | 0.00113 U | 0.00113 U |
| | 03/27/2018 | PES | 50 | 5 | | | | 0.00111 U | 0.00555 U | 0.00111 U | 0.00333 U | 0.00111 U | 0.00111 U | 0.00111 U | 0.00111 U | 0.00767 |
| | 03/27/2018 | PES | 61 | -6 | | | | 0.00114 U | 0.00568 U | 0.00114 U | 0.00341 U | 0.00114 U | 0.00114 U | 0.00114 U | 0.00114 U | 0.000344 J |
| | 03/27/2018 | PES | 70 | -15 | | | | 0.00111 U | 0.00557 U | 0.00111 U | 0.00334 U | 0.00111 U | 0.00111 U | 0.00111 U | 0.00111 U | 0.000902 J |
| | 03/28/2018 | PES | 110 | -55 | | | | 0.00118 U | 0.00588 U | 0.00118 U | 0.00353 U | 0.00254 | 0.00118 U | 0.000773 J | 0.00118 U | 0.00311 |
| | 03/28/2018 | PES | 80 | -25 | | | | 0.0011 U | 0.00552 U | 0.0011 U | 0.00331 U | 0.0011 U | 0.0011 U | 0.000353 J | 0.0011 U | 0.00148 |
| | 03/28/2018 | PES | 90 | -35 | | | | 0.0012 U | 0.00602 U | 0.0012 U | 0.00361 U | 0.000799 J | 0.0012 U | 0.000596 J | 0.0012 U | 0.00176 |
| | 03/29/2018 | PES | 130 | -75 | | | | 0.00115 U | 0.00574 U | 0.00115 U | 0.00345 U | 0.000648 J | 0.00115 U | 0.00115 U | 0.00115 U | 0.00115 U |
| PW-4 | 05/13/1998 | B&V | | | 27 U | 53 U | 110 U | | | | | | | | | |
| R-MW4 | 10/22/1992 | Roux | 5 | 47 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| | 10/22/1992 | Roux | 15 | 37 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| | 10/22/1992 | Roux | 30 | 22 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| R-MW6 | 10/27/1992 | Roux | 6 | 39.5 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| | 10/27/1992 | Roux | 11 | 34.5 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| | 10/27/1992 | Roux | 16 | 29.5 | | | | | | | | 0.005 U | 0.005 U | | 0.005 U | 0.01 U |
| TB-12 | 08/01/1997 | B&V | 62 | -24.5 | 24 U | 60 U | 119 U | | | | | | | | | |
| TB-18 | 03/17/1998 | B&V | 20 | 38.3 | 28 U | 56 U | 110 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 03/17/1998 | B&V | 5 | 38.3 | 27 U | 55 U | 110 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 03/17/1998 | B&V | 57.5 | 38.3 | 28 U | 56 U | 110 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |

## Table 11 - Summary of Historical Soil Analytical Data



| Sample Location | Sample Date | Sampled By | Sample Depth (feet bgs) | Sample Elevation (feet NAVD88) | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | PCE | TCE | cDCE | tDCE | VC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-MW-01 (P-03) | 01/27/2012 | WW | 16 | 29.1 | | | | 0.001 U | 0.0006 J | 0.001 U | 0.002 U | 0.001 U | 0.001 U | 0.0006 J | 0.001 U | 0.001 U |
| | 01/27/2012 | WW | 22.5 | 22.6 | | | | 0.0009 U | 0.0007 J | 0.0009 U | 0.0018 U | 0.03 B | 0.0018 | 0.0021 | 0.0009 U | 0.0009 U |
| | 01/27/2012 | WW | 31.5 | 13.6 | | | | 0.21 U | 0.21 U | 0.21 U | 0.42 U | 16 B | 0.59 | 0.48 | 0.21 U | 0.21 U |
| | 01/27/2012 | WW | 45 | -0.4 | | | | 0.0007 U | 0.0006 J | 0.0007 U | 0.0014 U | 0.38 B | 0.022 | 0.041 | 0.0005 J | 0.0007 U |
| | 01/27/2012 | WW | 55.5 | -10.4 | | | | 0.045 U | 0.045 U | 0.045 U | 0.09 U | 1.9 J | 0.17 | 0.13 | 0.045 U | 0.045 U |
| | 01/27/2012 | WW | 65 | -19.4 | | | | 0.0008 U | 0.0008 U | 0.0008 U | 0.0016 U | 0.0008 U | 0.0008 U | 0.0008 U | 0.0008 U | 0.0008 U |
| | 01/27/2012 | WW | 73 | -27.9 | | | | 0.0007 U | 0.0006 J | 0.0007 U | 0.0014 U | 0.1 B | 0.0081 | 0.025 | 0.0007 U | 0.0007 U |
| W-MW-02 (P-06) | 01/29/2012 | WW | 9-9.5 | 34.5 | | | | 0.0009 J | 0.0013 U | 0.0013 U | 0.0026 U | 0.058 T | 0.0081 | 0.00 U | 0.0013 U | 0.0013 U |
| | 01/29/2012 | WW | 18.5-19 | 25 | | | | 0.0008 J | 0.0006 J | 0.0009 U | 0.0018 U | 0.0009 UT | 0.0009 U | 0.00 U | 0.0009 U | 0.0009 U |
| | 01/30/2012 | WW | 30.5-31 | 13 | | | | 0.27 U | 0.27 U | 0.27 U | 0.34 U | 18 | 0.41 | 0.40 | 0.27 U | 0.27 U |
| | 01/30/2012 | WW | 38-38.5 | 5.5 | | | | 0.046 U | 0.046 U | 0.046 U | 0.092 U | 0.14 | 0.057 | 0.52 | 0.046 U | 0.046 U |
| | 01/30/2012 | WW | 40.5-41 | 3 | | | | 0.036 U | 0.036 U | 0.036 U | 0.072 UU | 5.2 | 0.2 | 0.15 | 0.036 U | 0.036 U |
| | 01/30/2012 | WW | 48.5-49 | -5 | | | | 0.0008 U | 0.0008 U | 0.0008 U | 0.0016 U | 0.033 | 0.0007 J | 0.00 | 0.0008 U | 0.0008 U |
| | 01/30/2012 | WW | 48.5-49 (dup) | -5 | | | | 0.0009 U | 0.0009 U | 0.0009 U | 0.0018 U | 0.052 | 0.0011 | 0.00 | 0.0009 U | 0.0009 U |
| | 01/30/2012 | WW | 59-59.5 | -16 | | | | 0.043 U | 0.043 U | 0.043 U | 0.086 U | 0.53 | 0.037 J | 0.04 U | 0.043 U | 0.043 U |
| | 01/30/2012 | WW | 71.5-72 | -28 | | | | 0.0008 U | 0.0008 U | 0.0008 U | 0.0016 U | 0.0009 | 0.0008 U | 0.00 U | 0.0008 U | 0.0008 U |
| | 01/30/2012 | WW | 79-79.5 | -35.5 | | | | 0.0009 U | 0.0009 U | 0.0009 U | 0.0018 U | 0.0022 | 0.0009 U | 0.00 U | 0.0009 U | 0.0009 U |
| 21417-GP1 | 04/21/2017 | S & W | 25 | | 4.58 U | 21.8 U | 54.5 U | | | 0.0275 U | 0.0366 U | | | | | |
| 21417-GP2 | 04/21/2017 | S & W | 18 | | 3.8 U | 18.8 U | 47 U | | | | | | | | | |
| 21417-GP3 | 04/21/2017 | S & W | 15.5 | | | | | ND | ND | 0.0243 U | 0.0324 U | | | | | |
| 21417-GP4 | 04/21/2017 | S & W | 12 | | 14.6 | 21.2 U | 53 U | ND | | 0.0414 | 0.0607 | | | | | |
| | 04/21/2017 | S & W | 15 | | 269 | 20.9 U | 52.2 U | ND | | 0.456 | 0.551 | | | | | |
| 21417-GP5 | 05/19/2017 | S & W | 1 | | 4.32 U | 20.9 U | 52.4 U | | | 0.0259 U | 0.0346 U | | | | | |
| | 05/19/2017 | S & W | 14 | | 3.71 U | 20.4 U | 50.9 U | | | 0.0223 U | 0.0296 U | | | | | |
| 21417-GP6 | 05/19/2017 | S & W | 18 | | 3.98 U | 19 U | 47.5 U | | | 0.0239 U | 0.0318 U | | | | | |
| 21417-GP7 | 05/19/2017 | S & W | 2 | | 4.74 U | 22 U | 99.2 | | | 0.0284 U | 0.0378 U | | | | | |
| | 05/19/2017 | S & W | 13 | | 4.03 U | 19.9 U | 49.7 U | | | 0.0242 U | 0.0322 U | | | | | |
| 21417-MB1 | 05/12/2017 | S & W | 9 | | 4.04 U | 22.2 U | 55.4 U | | 0.0162 U | | | 0.0162 U | | | | |
| 21417-MB2 | 05/12/2017 | S & W | 1 | | PAHs TEF = 0.01 mg/kg | | | | | | | | | | | |
| | 05/12/2017 | S & W | 10 | | 4.69 U | 22.6 U | 56.2 U | | 0.0187 U | | | 0.0187 U | | | | |
| 21417-MB3 | 05/12/2017 | S & W | 1 | | PAHs TEF = 0.05 mg/kg | | | | | | | | | | | |
| | 05/12/2017 | S & W | 20 | | 4.06 U | 20.9 U | 120 | | 0.0162 U | | | 0.0162 U | | | | |
| 21417-MB4 | 05/12/2017 | S & W | 24 | | 3.43 U | 23.2 U | 57.9 U | | 0.0137 U | | | 0.0137 U | | | | |
| 21417-MB5 | 05/12/2017 | S & W | 9 | | 3.29 U | 20.9 U | 52.3 U | | 0.0132 U | | | 0.0132 U | | | | |
| 21417-MB6 | 05/11/2017 | S & W | 9 | | 3.4 U | 19.4 U | 48.4 U | | 0.0136 U | | | 0.0136 U | | | | |
| 21417-MB7 | 05/11/2017 | S & W | 11 | | 4.09 U | 18.7 U | 46.8 U | | 0.0163 U | | | 0.0163 U | | | | |
| 21417-MB8 | 05/11/2017 | S & W | 27 | | 3.81 U | 20.9 U | 52.3 U | | 0.0152 U | | | 0.0238 | | | | |
| 21417-MB9 | 05/11/2017 | S & W | 13 | | 5.91 U | 25.3 U | 206 | | 0.0237 U | | | 0.0237 U | | | | |
| | 05/11/2017 | S & W | 22 | | 4.64 U | 21.3 U | 74.3 | | 0.0186 U | | | 0.0186 U | | | | |
| 21417-MB10 | 05/11/2017 | S & W | 28 | | 4.33 U | 22.2 U | 55.4 U | | 0.0173 U | | | 0.0173 U | | | | |
| 21417-MB11 | 05/11/2017 | S & W | 23 | | 6.43 U | 25.7 U | 64.3 U | | 0.0348 | | | 0.0257 U | | | | |

ND = Not detected.
U = Not detected at detection limit indicated.

## Table 12 - Analytical Results for Detected Organics in Groundwater Samples

| Sample Location | Sample Type | Sample Depth (feet) | Sample Elevation (feet NGVD88) | Sampling Date | NWTPH-Gx in µg/L | Volatiles in µg/L | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | GRO | Vinyl chloride | trans-1,2-Dichloro-ethene | cis-1,2-Dichloro-ethene | Benzene | Trichloro-ethene | Toluene | Tetrachloro-ethene | Ethyl-benzene | Xylenes | Isopropyl-benzene | n-Propyl-benzene | 1,3,5-Trimethyl-benzene | 1,2,4-Trimethyl-benzene | sec-Butyl-benzene | Isopropyl-toluene | 1,2,4-Trichloro-benzene |
| **615 Dexter** | | | | | | | | | | | | | | | | | | | | |
| DGW-1 | Grab | 30 | 17 | 03/06/2019 | **340** | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **8.0** | **14** | **2.6** | **3.7** | **6.5** | **12** | **1.2** | **1.7** | **1.5** |
| DGW-2 | Grab | 30 | 29 | 03/07/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| DGW-3 | Grab | 45 | 2 | 03/06/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| DGW-4 | Grab | 40 | 25 | 03/04/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| DGW-4 (dup) | Grab | 40 | 25 | 03/04/2019 | 100 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DMW-1S | Well | 21 | 26 | 03/25/2019 | **350** | 0.2 U | 1 U | 1 U | **1.5** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **1.5** | 1 U |
| DMW-1S (dup) | Well | 22 | 25 | 03/25/2019 | **300** | 0.2 U | 1 U | 1 U | **1.8** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | **2.5** | 1 U |
| DPP3 | Grab | 30 | 17 | 03/06/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| **Broad Block** | | | | | | | | | | | | | | | | | | | | |
| HMW-1S | Well | 25 | 22 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-1D | Well | 85 | -46 | 03/25/2019 | 100 U | **4.0** | **1.2** | **410** | 1 U | **27** | 1 U | **3.4** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-1IB | Well | 60 | -22 | 03/25/2019 | 100 U | 0.2 U | 1 U | **22** | 1 U | **6.7** | 1 U | **20** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-2S | Well | 25 | 22 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-2D | Well | 85 | -38 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-2IA | Well | 40 | 7 | 03/25/2019 | 100 U | **1.2** | 1 U | **120** | 1 U | **74** | 1 U | **240** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-2IA (dup) | Well | 40 | 7 | 03/25/2019 | 100 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| HMW-2IB | Well | 55 | -8 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | **3.4** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-3D | Well | 85 | -29 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | **1.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-3IA | Well | 40 | 15.5 | 03/25/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| HMW-4IA | Well | 55 | 1 | 03/25/2019 | 100 U | **3.6** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-1 | Grab | 30 | 15 | 03/06/2019 | 100 U | 0.2 U | 1 U | **19** | 1 U | **3.9** | 1 U | **9.5** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-2 | Grab | 30 | 13.5 | 03/04/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-3 | Grab | 30 | 17 | 03/07/2019 | 100 U | 0.2 U | 1 U | **4.8** | 1 U | **7.4** | 1 U | **35** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-5 | Grab | 30 | 23 | 03/15/2019 | 100 U | 0.2 U | 1 U | **2.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-6 | Grab | 30 | 22 | 03/15/2019 | 100 U | 0.2 U | 1 U | **1.0** | 1 U | **1.1** | 1 U | **4.3** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-7 | Grab | 40 | 12.5 | 03/06/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-8 | Grab | 25 | 22 | 03/19/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-9 | Grab | 30 | 22.5 | 03/15/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-10 | Grab | 30 | 23 | 03/15/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-11 | Grab | 45 | 8 | 03/15/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-12 | Grab | 27.5 | 26 | 03/19/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | **1.0** | 1 U | **5.1** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-13 | Grab | 30 | 24 | 03/15/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-15 | Grab | 30 | 9 | 03/15/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | **35** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-15 (dup) | Grab | 30 | 9 | 03/15/2019 | 100 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBGW-16 | Grab | 30 | 9 | 03/08/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MBGW-16 (dup) | Grab | 30 | 9 | 03/08/2019 | 100 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBPP-5 | Grab | 28 | 19 | 03/07/2019 | 100 U | 0.2 U | 1 U | 1 U | 1 U | 1 U | 1 U | **2.9** | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| MTCA Method Cleanup Level | | | | | 800/1000 * | 0.2 | 100** | 16 | 5 | 5 | 1000 | 5 | 700** | 1,000 | 800 | 800 | 80 | 80 | 800 | -- | 70** |

**Notes:**
U = Not detected at detection limit indicated.
-- = Not analyzed for this constituent.
*800 µg/L when benzene is present in groundwater; 1000 µg/L when benzene is not detected.
** Screening criteria is Maximum Contaminant Level (MCL).
Samples were analyzed for DRO and HRO but they were not detected in any sample.
MBGW-14 was analyzed for NWTPH-Dx only.
PAHs were analyzed for DMW-1S, but were not detected.
Shaded value indicates concentration above MTCA Cleanup Levels
Detected concentrations are bolded.
DRO = Diesel Range Organics, HRO = Heavy Oil Range Organics, GRO = Gasoline Range Organics

## Table 13 - Analytical Results for Detected Metals in Groundwater Samples

| qq Sample ID | Sampling Date | Dissolved Metals in µg/L | | | | | | | Total Metals in µg/L | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium |
| **615 Dexter** | | | | | | | | | | | | | | | |
| DGW1-GW | 3/6/2019 | **3.1** | 25 U | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **88** | **1,800** | 4.4 U | **870** | **92** | **0.92** | **13** |
| DGW2-GW | 3/7/2019 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **12** | **240** | 4.4 U | **77** | **11** | 0.5 U | 11 U |
| DGW3-GW | 3/6/2019 | 3 U | **55** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **100** | **3,000** | **5.1** | **1,400** | **120** | **1.3** | **12** |
| DGW4-GW | 3/4/2019 | 3 U | **27** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **87** | **1,900** | 4.4 U | **590** | **65** | **0.75** | **6.7** |
| DMW-1S-GW-21 | 03/25/19 | -- | -- | -- | -- | -- | -- | -- | **8.1** | **38** | 4.4 U | 11 U | 1.1 U | 0.5 U | 11 U |
| DMW-1S-GW-22 | 03/25/19 | -- | -- | -- | -- | -- | -- | -- | **8.3** | **40** | 4.4 U | **14** | 1.1 U | 0.5 U | 11 U |
| DPP3-GW | 3/6/2019 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **20** | **520** | 4.4 U | **260** | **18** | 0.5 U | 11 U |
| **Broad Block** | | | | | | | | | | | | | | | |
| HMW-1S-GW | 03/25/19 | -- | -- | -- | -- | -- | -- | -- | **14** | **83** | 4.4 U | 11 U | **2.7** | 0.5 U | 11 U |
| MBGW1-GW | 3/6/2019 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | 3.3 U | **65** | 4.4 U | **12** | **1.7** | 0.5 U | 11 U |
| MBGW2-30W | 3/4/2019 | 3 U | **44** | 4 U | 10 U | 1 U | 0.5 U | 5 U | -- | -- | -- | -- | -- | -- | -- |
| MBGW3 | 3/7/2019 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **5.9** | **140** | 4.4 U | **61** | **5.1** | 0.5 U | 11 U |
| MBGW5-GW | 03/15/19 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 U | 5 U | **130** | **3,200** | **5.8** | **1,500** | **140** | **2.2** | **25** |
| MBGW6-GW | 03/15/19 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 U | 5 U | **15** | **200** | 4.4 U | **74** | **10** | 0.5 U | 11 U |
| MBGW7-GW | 3/6/2019 | 3 U | **28** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **130** | **3,500** | **7.5** | **1,700** | **190** | **2.2** | **18** |
| MBGW8-GW | 03/19/19 | 3 U | **45** | 4 U | 10 U | 1 U | 0.5 U | 5 U | **37** | **800** | 4.4 U | **360** | **30** | 0.5 U | 11 U |
| MBGW9-GW | 03/15/19 | 3 U | 25 U | 4 U | 10 U | 1 U | 0.5 U | 5 U | **71** | **1,900** | 4.4 U | **930** | **89** | **0.88** | **7.9** |
| MBGW10-GW | 03/15/19 | 3 U | **26** | 4 U | 10 U | 1 U | 0.5 U | 5 U | **180** | **4,200** | **6.1** | **2,300** | **200** | **2.3** | **20** |
| MBGW11-GW | 03/15/19 | **6.9** | **32** | 4 U | 10 U | 1 U | 0.5 U | 5 U | **14** | **240** | 4.4 U | **86** | **8.9** | 0.5 U | 11 U |
| MBGW13-GW | 03/15/19 | **3.3** | 25 U | 4 U | 10 U | 1 U | 0.5 U | 5 U | **110** | **1,600** | 4.4 U | **910** | **110** | **1.8** | **9.5** |
| MBGW14 | 3/6/2019 | 3 U | **40** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **6.1** | **130** | 4.4 U | **38** | **16** | 0.5 U | 11 U |
| MBGW15-GW | 03/15/19 | 3 U | **95** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **35** | **390** | 4.4 U | **170** | **20** | 0.5 U | 11 U |
| MBGW16 | 3/8/2019 | 3 U | **25** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **210** | **4,600** | **5.3** | **2,400** | **190** | **1.8** | **31** |
| MBPP5-GW | 3/7/2019 | 3 U | **26** | 4 U | 10 U | 1 U | 0.5 UJ | 5 U | **15** | **230** | 4.4 U | **93** | **9.3** | 0.5 U | 11 U |
| MTCA Cleanup Level | | 5 | 2000** | 5 | 50 | 15 | 2 | 50 | | | | | | | |

Notes
U = Not detected at detection limit indicated.
-- = Not analyzed for this constituent.
*800 µg/L when benzene is present in groundwater; 1000 µg/L when benzene is not detected.
** Screening criteria for barium is Maximum Contaminant Level (MCL).
Silver was not detected in any of the samples analyzed for metals.
Shaded value indicates concentration above MTCA Cleanup Levels
Detected concentrations are bolded.

## Table 14 - Summary of Historical Groundwater Data

| Sample Location | Well Type | Property | Date | Sampled By | Sampling Method | TPH in ug/L | | | Volatiles in ug/L | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO | DRO | HRO | Benzene | cDCE | tDCE | Ethylbenzene | PCE | Toluene | TCE | VC | Xylenes |
| BB-5 | IA | South of Mercer St ROW | 11/17/1997 | B & V | Bailer | 250 U | 630 U | 630 U | | 1.1 | | | | | | | |
| | | | 11/17/1997 | B & V | Bailer | 250 U | 630 U | 630 U | | 1.1 | | | | | | | |
| BB-8 | IA | Roy St ROW | 06/24/1997 | B & V | Bailer | 200 U | 500 U | 1000 U | 1.8 | 4,200 | 14 | 1 U | 11,000 | 1.3 | 1,500 | 280 | 1 U |
| | | | 01/29/2009 | DOF | | 499 | | | 0.694 | 441 | 2.45 | 0.5 U | 896 f | 0.5 U | 258 | 1.48 | 1 U |
| | | | 05/03/2010 | SES | Peristaltic | | | | | 110 | 1 U | | 510 | | 120 | 0.27 | |
| | | | 06/02/2011 | SES | Peristaltic | 130 xy | 50 U | 250 U | 0.35 U | 44 | 1 U | 1 U | 170 | 1 U | 59 | 0.2 U | 3 U |
| | | | 09/05/2012 | SES | Peristaltic | | | | 0.35 U | 28 | 1 U | 1 U | 200 | 1 U | 41 | 0.2 U | 3 U |
| | | | 12/29/2013 | SES | Bladder | | | | 0.35 U | 24 | 1 U | 1 U | 200 | 1 U | 38 | 0.2 U | 3 U |
| | | | 06/17/2015 | SES | Peristaltic | | | | 9999 | 37 | 10 U | | 170 | | 40 | 2 | |
| | | | 03/22/2017 | PES | Peristaltic | | | | 0.0896 U | 3.1 | 0.152 U | 0.158 U | 30.4 | 0.412 U | 4.95 | 0.118 U | 0.316 U |
| | | | 06/14/2017 | PES | Peristaltic | | | | 0.0896 U | 12.6 | 0.155 J | 0.158 U | 26 | 0.412 U | 8.57 | 0.118 U | 0.316 U |
| | | | 04/11/2018 | PES | Peristaltic | 40.9 U | | | 0.0896 U | 4.64 J | 0.152 U | 0.158 U | 33.7 J | 0.412 U | 6.13 J | 0.118 U | 0.316 U |
| (dup) | | | 04/11/2018 | PES | Peristaltic | 41.5 U | | | 0.0896 U | 6.28 J | 0.152 U | 0.158 U | 46.8 J | 0.412 U | 8.41 J | 0.118 U | 0.316 U |
| | | | 01/23/2019 | PES | Peristaltic | 99.6 J | | | 0.5 U | 81.5 | 0.402 J | 0.5 U | 133 | 0.5 U | 43.1 | 0.618 | 1.5 U |
| | | | 04/23/2019 | PES | Peristaltic | 100 U | | | 0.5 U | 7.57 | 0.5 U | 0.5 U | 48.8 | 0.5 U | 9.09 | 0.5 UJ | 1.5 U |
| BB-8A | IA | Roy St ROW Decommissioned | 01/29/2009 | DOF | Peristaltic | 669 | | | 0.5 U | 549 | 2.96 | 0.5 U | 1,290 f | 0.5 U | 285 | 3.86 | 1 U |
| | | | 05/03/2010 | SES | Peristaltic | | | | | 140 | 1.6 | | 810 | | 180 | 0.78 | |
| | | | 06/02/2011 | SES | Peristaltic | 380 xy | 50 U | 250 U | 3.5 U | 170 | 10 U | 10 U | 710 | 10 U | 170 | 2 U | 30 U |
| BB-10 | IB | Dexter Avenue N ROW | 11/13/1997 | B & V | Bailer | 250 U | 630 U | 630 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | | | 11/13/1997 | B & V | Bailer | 250 U | 630 U | 630 U | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| F9 | Shallow | 700 Dexter Ave N | 03/27/2017 | PES | Peristaltic | 31.6 U | | | 0.529 | 0.158 J | 0.539 | 0.158 U | 0.199 U | 2.040 | 0.153 U | 0.118 U | 0.316 U |
| | | | 06/22/2017 | PES | Peristaltic | 31.6 U | | | 0.471 J | 6.1 | 0.61 | 0.158 U | 0.199 U | 1.700 | 0.153 U | 3.57 | 0.316 U |
| FMW-129 | Deep | SDOT Property S of Roy St | 05/23/2014 | Farallon | Unknown | | | | | 17 | ND | | 0.40 | | 0.57 | 7.6 | |
| | | | 10/20/2015 | SES | Peristaltic | | | | | 250 | 1 U | | 25 | | 39 | 0.2 U | |
| | | | 02/02/2016 | SES | Peristaltic | | | | | 240 | 1 U | | 13 | | 61 | 0.33 | |
| | | | 04/10/2017 | PES | Peristaltic | | | | 0.448 U | 1,420 | 5.05 | 0.79 U | 194 | 2.06 U | 492 | 0.885 J | 1.58 U |
| | | | 06/23/2017 | PES | Bladder | | | | 0.0896 U | 474 | 1.21 | 0.158 U | 81.1 | 0.412 U | 182 | 0.413 | 0.316 U |
| | | | 05/01/2019 | PES | Peristaltic | | | | | 372 | 1.22 | | 101 | 0.412 U | 166 | 0.590 U | |
| | | | 07/16/2019 | PES | Bladder | | | | | 272 | 1.61 | | 159 | 0.412 U | 84.1 | 0.296 J | |
| GEO-10-W1 | | Block 43 | 04/01/2003 | Kane | | 260 b | 430 | 420 U | 1 U | | | 1 U | | 1.000 U | | | 2 U |
| K-MW-1 | | Block 43 | 04/09/2003 | Kane | | 100 U | 250 U | 410 U | 1 U | | | 1 U | | 1.000 U | | | 2 U |
| K-MW-7 | | Block 43 | 04/09/2003 | Kane | | 100 U | 250 U | 400 U | 1 U | | | 1 U | | 1.000 U | | | 2 U |
| MW-9 | Shallow | | 03/20/2017 | PES | Peristaltic | 52.8 J | | | 0.0896 U | 0.14 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.324 J | 0.316 U |
| | | | 06/20/2017 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.214 J | 0.152 U | 0.158 U | 0.199 U | 0.562 | 0.153 U | 0.118 U | 0.316 U |
| MW-9 (dup) | Shallow | 8th Ave N ROW | 06/20/2017 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.211 J | 0.152 U | 0.158 U | 0.199 U | 0.548 | 0.153 U | 0.118 U | 0.316 U |
| MW-9 | Shallow | 8th Ave N ROW | 04/05/2018 | PES | Peristaltic | 32.9 J | | | 0.0896 U | 0.246 J | 0.152 U | 0.158 U | 1.58 | 0.412 U | 0.153 U | 0.21 J | 0.316 U |
| MW102 | Deep | Valley Street ROW | 03/29/2017 | PES | Bladder | | | | 0.0896 U | 0.223 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 06/15/2017 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 04/25/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.352 J | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| MW104 | Deep | 8th Ave N ROW | 03/30/2017 | PES | Peristaltic | | | | 0.0896 U | 3.97 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 06/30/2017 | PES | Bladder | | | | 0.0896 U | 1.54 | 0.152 U | 0.158 U | 5.83 | 0.903 | 5.21 | 0.118 U | 0.396 J |
| | | | 04/09/2018 | PES | Peristaltic | 81.3 J | | | 0.0896 U | 176 | 1.02 | 0.158 U | 0.541 | 0.412 U | 2 | 32.3 | 0.316 U |

## Table 14 - Summary of Historical Groundwater Data

| Sample Location | Well Type | Property | Date | Sampled By | Sampling Method | TPH in ug/L | | | Volatiles in ug/L | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO | DRO | HRO | Benzene | cDCE | tDCE | Ethylbenzene | PCE | Toluene | TCE | VC | Xylenes |
| MW-105 | Deep | Roy St ROW | 08/16/2012 | SES | Peristaltic | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.32 | |
| | | | 09/05/2012 | SES | Peristaltic | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.23 | 3 U |
| | | | 12/29/2013 | SES | Bladder | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | 3 U |
| | | | 04/12/2015 | SES | Peristaltic | | | | | 1 U | 1 U | | 1.2 | | 1.6 | 0.2 U | |
| | | | 06/17/2015 | SES | Peristaltic | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 10/27/2015 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 02/03/2016 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 1.6 | |
| | | | 04/21/2017 | PES | Bladder | | | | 0.0896 U | 0.155 J | 0.152 U | 0.158 U | 0.199 U | 0.544 J | 0.153 U | 1.95 | 0.316 U |
| | | | 06/14/2017 | PES | Bladder | | | | 0.0896 U | 0.18 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.356 J | 0.514 | 0.316 U |
| | | | 04/11/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 1.67 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.205 J | 0.316 U |
| | | | 01/23/2019 | PES | Bladder | 100 U | | | 0.5 U | 1.51 | 0.5 U | 0.5 U | 0.79 | 0.5 U | 0.317 J | 0.392 J | 1.5 U |
| | | | 04/23/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.917 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.238 J | 1.5 U |
| MW-106 | Deep | SDOT Property S of Roy St | 08/22/2012 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 1 U | |
| | | | 09/05/2012 | SES | Bladder | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | 3 U |
| | | | 12/17/2013 | SES | Bladder | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | 3 U |
| | | | 10/27/2015 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 02/02/2016 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 04/14/2017 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 06/30/2017 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.419 J | 0.153 U | 0.118 U | 0.316 U |
| | | | 05/04/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 04/26/2019 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 UJ | 0.316 U |
| | | | 07/19/2019 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| MW107 | IA | 8th Ave N ROW | 03/27/2017 | PES | Peristaltic | | | | 0.204 J | 6.82 | 14 | 0.158 UJ | 0.224 J | 0.690 J | 0.37 J | 34.5 | 0.316 U |
| | | | 06/19/2017 | PES | Peristaltic | | | | 0.238 J | 7.29 | 12.6 | 0.158 U | 0.199 U | 0.700 | 0.29 J | 15 | 0.316 U |
| | | | 04/09/2018 | PES | Peristaltic | | | | 0.193 J | 72.1 J- | 10.5 | 0.158 UJ | 0.879 J- | 0.412 U | 0.581 J- | 12.3 | 0.316 U |
| MW-110 | IA | Alley Between 8th & 9th Ave | 12/21/2012 | SES | Bladder | | | | | 470 | 3 | | 1100 | | 220 | 33 | |
| | | | 12/19/2013 | SES | Peristaltic | | | | 0.35 U | 840 | 3.9 | 1 U | 930 | 1 U | 240 | 31 | 3 U |
| | | | 04/22/2015 | SES | Peristaltic | | | | | 340 | 2.4 | | 1,000 | | 210 | 1 | |
| | | | 06/17/2015 | SES | Peristaltic | | | | | 470 | 10 U | | 1,000 | | 200 | 12 | |
| | | | 10/20/2015 | SES | Peristaltic | | | | | 380 | 2.2 | | 890 | | 180 | 13 | |
| | | | 03/23/2017 | PES | Peristaltic | | | | 0.33 J | 644 | 4.72 | 0.158 U | 1070 | 0.412 U | 389 | 1.45 | 0.316 U |
| | | | 06/27/2017 | PES | Bladder | | | | 0.0896 U | 1120 | 2.66 | 0.158 UJ | 259 | 0.412 U | 176 | 152 | 0.316 U |
| | | | 04/09/2018 | PES | Bladder | | | | 0.0896 U | 675 J- | 3.72 | 0.158 U | 375 J- | 0.412 U | 253 J- | 3.54 | 0.316 U |
| | | | 01/23/2019 | PES | Bladder | | | | 0.5 U | 673 | 5.83 | 0.5 U | 1260 | 0.5 U | 490 | 1.39 | 1.5 U |
| | | | 04/26/2019 | PES | Bladder | | | | 0.291 J | 710 | 5.59 | 0.5 U | 1500 | 0.5 U | 613 | 0.9 K | 1.5 U |
| MW-112 | IB | Dexter Ave North ROW | 12/21/2012 | SES | Bladder | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 12/26/2013 | SES | Bladder | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | |
| | | | 03/22/2017 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 06/16/2017 | PES | Bladder | | | | 0.0896 U | 0.0933 U | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 04/12/2018 | PES | Peristaltic | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 04/22/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 UJ | 1.5 U |
| MW-114 | | | 12/21/2012 | SES | Peristaltic | | | | | 260 | 1 U | | 1400 | | 290 | 14 | |
| | | | 12/18/2013 | SES | Peristaltic | | | | 17 U | 640 | 50 U | 50 U | 8400 | 50 U | 1300 | 22 | 150 U |
| MW-115 | | | 01/30/2019 | PES | Peristaltic | | | | 0.5 U | 0.316 J | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 12.4 | 1.5 U |
| MW-117 | | Dexter Avenue N ROW | 02/08/2013 | SES | Peristaltic | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 12/18/2013 | SES | Peristaltic | 100 U | 50 U | 250 U | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | 3 U |
| MW-118 | | South-Adjoining | 03/25/2013 | SES | Peristaltic | | | | | 1 U | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 12/18/2013 | SES | Peristaltic | 100 U | 50 U | 250 U | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | 3 U |

## Table 14 - Summary of Historical Groundwater Data

| Sample Location | Well Type | Property | Date | Sampled By | Sampling Method | TPH in ug/L | | | Volatiles in ug/L | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO | DRO | HRO | Benzene | cDCE | tDCE | Ethylbenzene | PCE | Toluene | TCE | VC | Xylenes |
| MW-119 | IA | 9th Ave N ROW | 03/25/2013 | SES | Peristaltic | | | | | 3.3 | 1 U | | 1 U | | 1 U | 0.2 U | |
| | | | 12/19/2013 | SES | Peristaltic | | | | 0.35 U | 2.5 | 1 U | 1 U | 1 U | 1 U | 1 U | 0.76 | 3 U |
| | | | 04/21/2015 | SES | Peristaltic | | | | | 50 | 1 U | | 34 | | 42 | 3.1 | |
| | | | 06/17/2015 | SES | Peristaltic | | | | | 52 | 1 U | | 4.9 | | 7.1 | 2.7 | |
| | | | 10/20/2015 | SES | Peristaltic | | | | | 74 | 1 U | | 15 | | 22 | 0.45 | |
| | | | 02/02/2016 | SES | Peristaltic | | | | | 100 | 1 U | | 7.3 | | 24 | 0.45 | |
| | | | 03/29/2017 | PES | Peristaltic | | | | 0.139 | 42.9 | 0.334 J | 0.158 U | 5.47 | 0.412 U | 10.7 | 0.272 J | 0.316 U |
| | | | 06/28/2017 | PES | Bladder | | | | 0.0896 U | 5.99 | 0.167 J | 0.158 U | 19 | 0.726 | 12.4 | 0.118 U | 0.562 J |
| | | | 04/05/2018 | PES | Peristaltic | | | | 0.0896 U | 18.3 | 0.203 J | 0.158 U | 2.14 | 0.412 U | 3.02 | 0.118 U | 0.316 U |
| | | | 01/21/2019 | PES | Peristaltic | | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.24 | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 04/29/2019 | PES | Peristaltic | | | | 0.5 U | 10.9 | 0.161 J | 0.5 U | 0.224 J | 0.5 U | 1.12 | 0.5 UJ | 1.5 U |
| MW121 | Shallow | 700 Dexter Ave N | 03/28/2017 | PES | Peristaltic | | | | 0.0896 U | 0.768 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 5.82 | 0.316 U |
| | | | 06/20/2017 | PES | Peristaltic | | | | 0.186 J | 1.13 | 0.152 U | 0.158 U | 0.199 U | 0.774 | 0.153 U | 7.68 | 0.316 U |
| | | | 04/05/2018 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.959 | 0.152 U | 0.158 U | 2.93 | 0.412 | 0.153 U | 6.45 | 0.316 U |
| MW130 | IB | 700 Dexter Ave N | 03/29/2017 | PES | Bladder | 8890 z | | | 1.79 U | 7880 | 0.152 U | 0.158 U | 721 | 8.240 U | 830 | 186 | 6.32 U |
| | | | 06/30/2017 | PES | Bladder | 10300 Jz | | | 0.896 U | 20100 | 55.6 | 1.58 U | 6760 J | 4.120 U | 4020 | 597 | 3.16 U |
| MW130 (dup) | IB | 700 Dexter Ave N | 06/30/2017 | PES | Bladder | 15000 Jz | | | 0.896 U | 21300 | 57.3 | 1.58 U | 11100 J | 4.120 U | 5310 | 549 | 3.16 U |
| MW130 | IB | 700 Dexter Ave N | 05/21/2018 | PES | Bladder | 19700 z | | | 0.403 J | 29500 | 114 | 0.227 J | 13500 | 1.370 | 7400 | 1650 | 1.12 J |
| MW131 | IB | 697 Dexter Ave N | 03/27/2017 | PES | Peristaltic | 91.9 J | | | 0.199 J | 243 | 0.981 | 0.158 U | 0.199 U | 0.462 J | 0.153 U | 804 | 0.316 U |
| | | | 06/20/2017 | PES | Peristaltic | 31.6 U | | | 0.448 U | 2.55 | 0.76 U | 0.79 U | 0.995 U | 2.060 U | 0.765 U | 435 | 1.58 U |
| | | | 04/16/2018 | PES | Peristaltic | 55.3 U | | | 0.142 J | 10.4 | 0.276 J | 0.158 U | 0.199 U | 0.412 U | 3.25 | 18 | 0.316 U |
| MW132 | IB | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 95.9 U | | | 0.448 U | 196 | 0.76 U | 0.79 U | 0.995 U | 2.060 U | 1.95 J | 1.76 J | 1.58 U |
| | | | 04/26/2018 | PES | Bladder | 2630 z | | | 0.422 J | 3300 | 16.3 | 0.158 U | 2830 | 0.412 U | 840 | 10.2 | 0.316 U |
| MW-133 | Deep | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 41.2 U | | | 0.0896 U | 13.3 | 1.13 | 0.158 U | 12.7 | 0.748 | 16.2 | 0.239 J | 0.316 U |
| | | | 04/25/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 10.7 | 0.315 J | 0.158 U | 0.646 | 0.837 | 0.516 | 3.51 | 0.316 U |
| MW-135 | IB | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 10900 z | | | 14.3 U | 16100 | 15.2 U | 15.8 U | 10400 | 41.200 U | 2480 | 82 J | 31.6 U |
| | | | 04/25/2018 | PES | Peristaltic | 347000 z | | | 0.143 U | 27700 | 30.7 | 0.484 J | 75800 | 3.090 | 78900 | 989 | 2.61 |
| MW-136 | IB | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 55.2 U | | | 0.332 J | 18.7 | 0.152 U | 0.158 U | 15.4 | 0.412 U | 10.7 | 0.118 U | 0.316 U |
| | | | 04/16/2018 | PES | Submersible | 256 | | | 0.26 J | 4.73 | 0.152 U | 0.158 U | 2.59 | 1.830 | 0.365 J | 8.57 26 | 0.316 U |
| MW-137 | Deep | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 58.5 U | | | 0.0896 U | 62 | 0.152 U | 0.158 U | 15 | 3.900 | 19.1 | 0.118 U | 0.316 U |
| | | | 04/12/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 1.79 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 4.26 | 0.316 U |
| MW-138 | | | 09/14/2017 | PES | Bladder | | | | 0.275 J | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 10.4 | 0.5 U | 0.5 U | 1.5 U |
| | | | 09/21/2017 | PES | Bladder | 63.3 J | | | 1 U | 1 U | 1 U | 1 U | 1 U | 2.6 | 1 U | 1 U | 3 U |
| | | | 04/11/2018 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 10/29/2018 | PES | Bladder | 38.5 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.169 J | 1.5 U |
| | | | 12/17/2018 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 01/03/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.442 J | 0.5 U | 0.5 U | 1.5 U |
| | | | 03/14/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.262 J | 0.5 U | 0.5 U | 1.49 | 0.5 U | 0.167 J | 0.5 U | 1.5 U |
| | | | 04/22/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 UJ | 1.5 U |
| MW-139 | IB | 700 Dexter Ave N | 09/25/2017 | PES | Bladder | 62.2 U | | | 0.0896 U | 1.42 | 0.152 U | 0.158 U | 0.199 U | 0.516 | 19.1 | 0.246 J | 0.316 U |
| | | | 04/25/2018 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.175 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| MW-140 | Deep | Roy St ROW | 09/22/2017 | PES | Bladder | | | | 0.0896 U | 0.477 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.45 J | 0.118 U | 0.316 U |
| | | | 09/22/2017 | PES | Bladder | | | | 0.0896 U | 0.477 J | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.45 J | 0.118 U | 0.316 U |
| (dup1) | | | 09/22/2017 | PES | Bladder | | | | 0.0896 U | 0.523 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.456 J | 0.118 U | 0.316 U |
| (dup2) | | | 09/22/2017 | PES | Bladder | | | | 0.0896 U | 0.523 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.456 J | 0.118 U | 0.316 U |
| | | | 04/12/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 2.47 J+ | 0.152 U | 0.158 U | 0.402 J+ | 0.412 U | 0.572 J+ | 0.246 J+ | 0.316 U |
| | Deep | 700 Dexter Ave N | 09/22/2017 | PES | Bladder | | | | 0.0896 U | 0.345 J | 0.152 U | 0.158 U | 0.199 U | 0.941 | 0.153 U | 0.457 J | 0.316 U |
| MW-141 | | | 04/12/2018 | PES | Submersible | 326 | | | 0.0896 U | 91.6 J+ | 5.68 J+ | 0.158 U | 71.3 J+ | 0.412 U | 25.6 J+ | 7.01 J+ | 0.316 U |

## Table 14 - Summary of Historical Groundwater Data

| Sample Location | Well Type | Property | Date | Sampled By | Sampling Method | TPH in ug/L | | | Volatiles in ug/L | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO | DRO | HRO | Benzene | cDCE | tDCE | Ethylbenzene | PCE | Toluene | TCE | VC | Xylenes |
| MW-146 | IA | 8th Ave N ROW | 04/30/2018 | PES | Bladder | 597 | | | 0.0896 U | 900 | 6.12 | 0.158 U | 3.56 | 0.412 U | 48.4 | 2100 | 0.316 U |
| | | | 01/22/2019 | PES | Bladder | 509 J | | | 0.5 U | 1080 | 7.25 | 0.5 U | 2.29 | 0.5 U | 21.6 | 1370 | 1.5 U |
| | | | 04/24/2019 | PES | Bladder | 88 J | | | 0.5 U | 257 | 1.94 | 0.5 U | 1.5 | 0.5 U | 12.4 | 383 | 1.5 U |
| MW-147 | IB | Roy St ROW | 05/01/2018 | PES | Bladder | 484 | | | 0.0896 U | 399 | 2.09 | 0.158 U | 19.8 | 0.412 U | 83.4 | 1150 | 0.316 U |
| | | | 01/22/2019 | PES | Bladder | 663 J | | | 0.5 U | 1230 | 2.88 | 0.5 U | 98.2 | 0.5 U | 179 | 738 | 1.5 U |
| | | | 04/23/2019 | PES | Bladder | 139 | | | 0.5 U | 322 | 1.47 | 0.5 U | 0.5 U | 0.5 U | 5.13 | 499 | 1.5 UJK |
| MW-148 (dup) | IB | Roy St ROW | 05/01/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 0.0933 UJ | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 05/01/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 0.216 | 0.152 U | 0.158 U | 0.199 U | 0.412 U | 0.153 U | 0.118 U | 0.316 U |
| | | | 01/23/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1.24 | 0.5 U | 0.347 J | 0.5 U | 1.5 U |
| | | | 04/26/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.277 J | 1.5 U |
| MW-153 | Deep | Roy St ROW | 05/01/2018 | PES | Bladder | 31.6 J | | | 0.0896 U | 0.612 | 0.152 U | 0.158 U | 0.756 | 0.412 U | 0.153 U | 9.56 | 0.316 U |
| | | | 01/22/2019 | PES | Bladder | 100 U | | | 0.5 U | 1.41 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 15.9 | 1.5 U |
| | | | 04/24/2019 | PES | Bladder | 100 U | | | 0.5 U | 1.07 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 2.69 | 1.5 U |
| MW-154 | Shallow | Roy St ROW | 04/30/2018 | PES | Bladder | 32.1 U | | | 0.0896 U | 1.77 | 0.152 U | 0.158 U | 4.46 | 0.412 U | 0.23 J | 7.48 | 0.316 U |
| MW-155 | Shallow | Roy St ROW | 04/27/2018 | PES | Peristaltic | 60.9 U | | | 0.0896 U | 0.466 J | 0.152 U | 0.158 U | 3.48 | 0.412 U | 0.334 J | 0.447 J | 0.316 U |
| | | | 01/21/2019 | PES | | 100 U | | | 0.5 U | 0.274 J | 0.5 U | 0.5 U | 3.72 | 0.5 U | 0.581 | 0.5 U | 1.5 U |
| | | | 04/23/2019 | PES | | 100 U | | | 0.5 U | 71.9 | 0.5 U | 0.5 U | 14.6 | 0.5 U | 4.75 | 6.54 K | 1.5 U |
| R-MW-3 | Shallow | 700 Dexter Ave N | 03/21/2017 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.575 | 0.152 U | 0.158 U | 1.38 | 0.412 U | 0.714 | 0.118 U | 0.316 U |
| | | | 06/28/2017 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 0.735 | 0.152 U | 0.158 U | 0.834 | 0.412 U | 0.582 | 0.424 J | 0.316 U |
| | | | 04/04/2018 | PES | Peristaltic | 33.7 J | | | 0.0896 U | 1.35 | 0.152 U | 0.158 U | 16.4 | 0.412 U | 0.972 | 0.214 J | 0.316 U |
| R-MW4 | | | 10/24/1992 | Roux | | 410 | 201 | 1000 U | 0.5 U | | 5 U | 1 | 814 | 2 | 64 | 5 U | 4 |
| | | | 10/24/1992 | DOF | | 640 | | | 0.5 U | 2 U | NA | 0.5 U | 31 | 1.8 | 2.8 | 2 U | 3.1 |
| R-MW5 | Shallow | Dexter Ave N | 06/02/2011 | SES | Peristaltic | 100 U | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | |
| | | | 09/05/2012 | SES | Peristaltic | | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | |
| | | | 12/18/2013 | SES | Peristaltic | 100 U | | | 0.35 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.2 U | |
| | | | 04/11/2018 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.621 | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 01/03/2019 | PES | Bladder | 81.5 J | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.477 J | 0.5 U | 0.5 U | 0.5 U | 1.5 U |
| | | | 04/22/2019 | PES | Bladder | 100 U | | | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.499 J | 0.428 J | 0.155 J | 0.5 UJ | 1.5 U |
| R-MW6 | Shallow | 8th Ave N ROW | 03/21/2017 | PES | Peristaltic | 42.8 J | | | 0.0896 U | 20 | 0.242 J | 0.158 U | 1.08 | 0.412 U | 3.17 | 8.65 | 0.316 U |
| | | | 06/20/2017 | PES | Peristaltic | 38.5 J | | | 0.167 J | 37.3 | 0.445 J | 0.158 U | 1.19 | 0.619 | 0.878 | 43.9 | 0.316 U |
| | | | 04/06/2018 | PES | Peristaltic | 31.6 U | | | 0.0896 U | 19.4 | 0.277 J | 0.158 U | 1.85 | 0.412 U | 2.24 | 26.9 | 0.316 U |
| TB-18 | | South-Adjoining | 06/04/1998 | B & V | Bailer | 250 U | 630 U | 630 U | ND | ND | ND | ND | ND | 1.2 | ND | ND | ND |
| W-MW-01 | IB | 8th Ave N ROW | 02/02/2012 | WW | Bladder | | | | 20 U | 11 | 0.2 U | 0.2 U | 46 | 0.1 J | 3.9 | 0.5 | 0.6 U |
| | | | 09/06/2012 | SES | Peristaltic | | | | 0.35 U | 2 | 1.0 U | 1 U | 1 U | 1.7 | 1 U | 2.8 | 3 U |
| | | | 06/17/2015 | SES | Peristaltic | | | | | 1 U | 1.0 U | | 1 U | | 1 U | 0.5 | |
| | | | 10/20/2015 | SES | Peristaltic | | | | | 1 U | 1.0 U | | 1 U | | 1 U | 0.9 | |
| | | | 01/08/2016 | SES | Peristaltic | | | | | 1 U | 1.0 U | | 1 U | | 1 U | 2.5 | |
| | | | 02/01/2016 | SES | Peristaltic | | | | | 1 U | 1.0 U | | 1 U | | 1 U | 2.8 | |
| | | | 03/30/2017 | PES | Peristaltic | | | | 0.0896 U | 0 J | 0.2 U | 0.158 U | 0.33 J | 0.412 U | 0 J | 1.8 J | 0.316 U |
| | | | 06/19/2017 | PES | Bladder | | | | 0.158 J | 0.32 J | 0.152 U | 0.158 U | 0.199 U | 0.931 | 0.153 U | 1.09 | 0.316 U |
| | | | 04/13/2018 | PES | Bladder | | | | 0.0896 U | 1.31 | 0.152 U | 0.158 U | 5.33 | 0.412 U | 1.68 | 8.79 | 0.316 U |
| W-MW-02 | IB | 8th Ave N ROW | 03/27/2017 | PES | Peristaltic | | | | 0.27 J | 33 | 2.16 | 0.158 U | 0.199 U | 0.961 J | 0.259 J | 36.4 | 0.316 U |
| | | | 06/19/2017 | PES | Bladder | | | | 0.307 J | 18.2 | 0.746 | 0.158 U | 0.199 U | 0.970 | 0.153 U | 25.6 | 0.316 U |
| | | | 06/12/2018 | PES | Bladder | 31.6 U | | | 0.0896 U | 4.72 | 0.279 J | 0.158 U | 0.199 U | 0.829 | 0.153 U | 4.95 | 0.316 U |

## Table 14 - Summary of Historical Groundwater Data

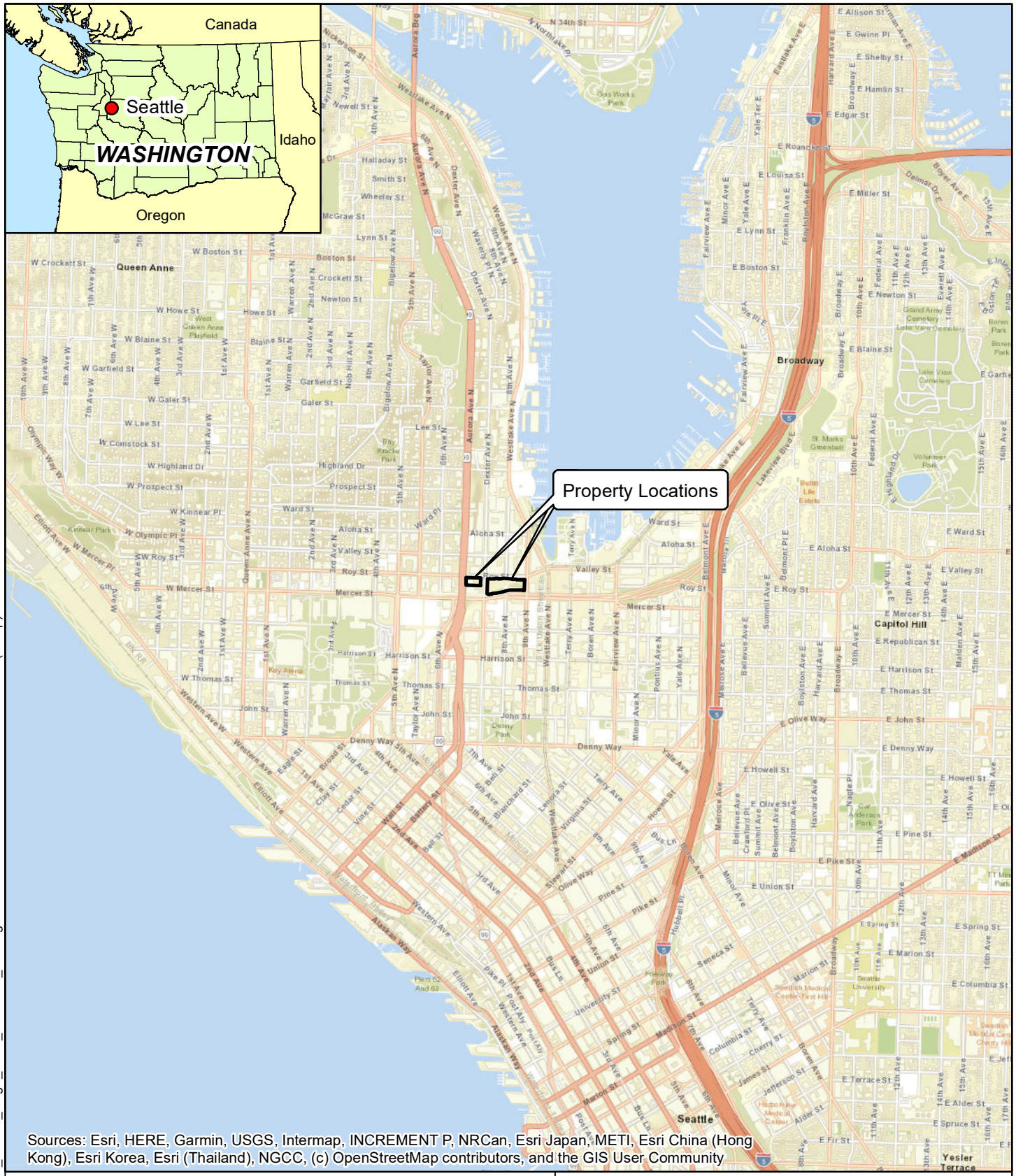
| Sample Location | Well Type | Property | Date | Sampled By | Sampling Method | TPH in ug/L | | | Volatiles in ug/L | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO | DRO | HRO | Benzene | cDCE | tDCE | Ethylbenzene | PCE | Toluene | TCE | VC | Xylenes |
| 21417-GP1 | Shallow | 615 Dexter | 04/21/2017 | S & W | Grab | 50 U | 50 U | 100 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 U | 0.2 U | 2 U |
| 21417-GP3 | Shallow | 615 Dexter | 04/21/2017 | S & W | Grab | 50 U | 49.8 U | 99.6 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 U | 0.2 U | 2 U |
| 21417-GP4 | Shallow | 615 Dexter | 04/21/2017 | S & W | Grab | 4830 | | | 1 U | 1 U | 1 U | 94.3 | 1 U | 1.15 | 0.5 U | 0.2 U | 2 U |
| 21417-MB4 | Shallow | Broad Block | 05/12/2017 | S & W | Grab | 50 U | 281 | 226 | 1 U | 1 U | 1 U | 1 U | 1 U | 2.99 | 0.5 U | 0.2 U | 2 U |
| 21417-MB9 | Shallow | Broad Block | 05/11/2017 | S & W | Grab | 50 U | 50 U | 146 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 U | 0.2 U | 2 U |
| 21417-MB10 | Shallow | Broad Block | 05/11/2017 | S & W | Grab | 50 U | 50 U | 970 | 1 U | 1 U | 1 U | 1 U | 1 U | 1.85 | 0.5 U | 0.2 U | 2 U |
| 21417-MB11 | Shallow | Broad Block | 05/11/2017 | S & W | Grab | 50 U | 50.1 U | 238 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.5 U | 0.2 U | 2 U |

ND = Not detected.
U = Not detected at detection limit indicated.

## Table 15 - Summary of Field Water Quality Parameters

| Well ID | Date Measured | pH | Temperature (°C) | Conductivity (µs/cm) | Diss. Oxygen (mg/L) | Turbidity (NTUs) | ORP (mV) |
|---|---|---|---|---|---|---|---|
| DMW-1S | 3/21/2019 | 7.22 | 16.10 | 434.00 | 110 | 100 | 4.04 |
| HMW-4IA | 3/19/2019 | 7.95 | 15.90 | 569.00 | 1.41 | 25 | 69.1 |
| HMW-3IA | 3/19/2019 | 7.23 | 17.40 | 585.00 | 6.01 | -- | 45.7 |
| HMW-3D | 3/19/2019 | 8.13 | 16.90 | 544.00 | 0.74 | -- | -434 |
| HMW-2S | 3/19/2019 | 7.31 | 15.30 | 686.00 | 1.64 | 110 | 29.3 |
| HMW-2IA | 3/20/2019 | 7.55 | 14.70 | 958.00 | 2.6 | 14 | -166 |
| HMW-2IB | 3/20/2019 | 8.16 | 14.80 | 764.00 | 0.42 | 200 | -180 |
| HMW-2D | 3/19/2019 | 7.75 | 15.40 | 292.40 | 0.16 | -- | -467.3 |
| HMW-1S | 3/20/2019 | 6.33 | 14.40 | 494.00 | 0.28 | 128 | -64 |
| HMW-1IB | 3/20/2019 | 7.11 | 14.40 | 605.00 | 0.2 | 60 | -52 |
| HMW-1D | 3/20/2019 | 7.07 | 14.90 | 695.00 | 0.17 | 52 | -73 |

**Note:**
Turbidity was not recorded for several wells, -- = no data




0 1,000 2,000 4,000 Feet

N

Mercer Megablock
Seattle, Washington

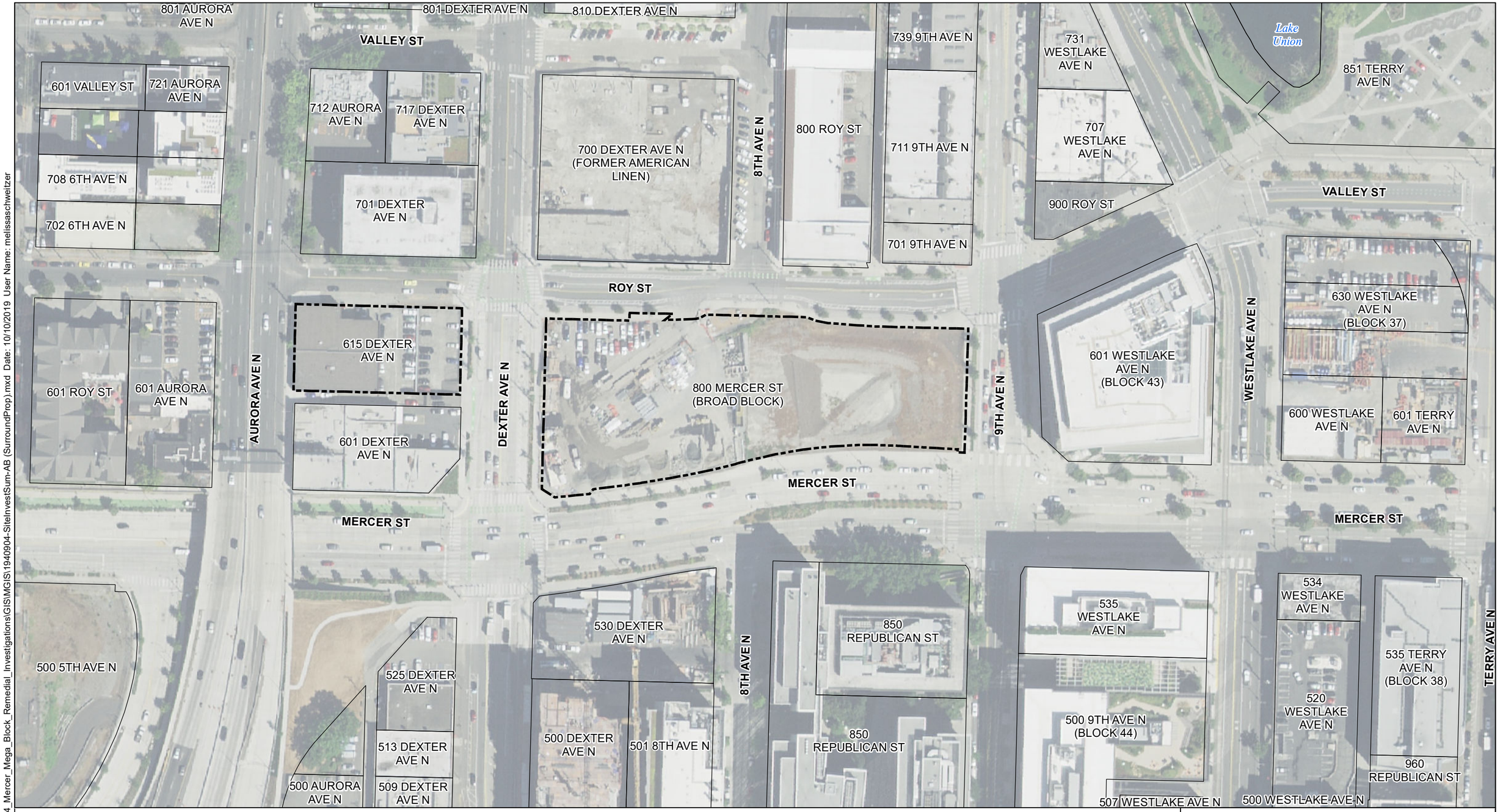
**Vicinity Map**

19409-04 10/19

HARTCROWSER

Figure 1

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AA (VMap).mxd Date: 10/9/2019 User Name: melissaschweitzer




**Legend**

- Other Parcel Boundary
- MMB Parcel Boundary

MMB = Mercer Megablock (which includes 615 Dexter Ave N and Broad Block)

0 60 120 240 Feet

Note: Feature locations are approximate.

N

Sourced: Aerial photograph provided by Hexagon Imagery Program Data. Address information obtained from King County GIS Open Data portal's Parcel Address Area shapefile, published April 4, 2019.

Mercer Megablock
Seattle, Washington

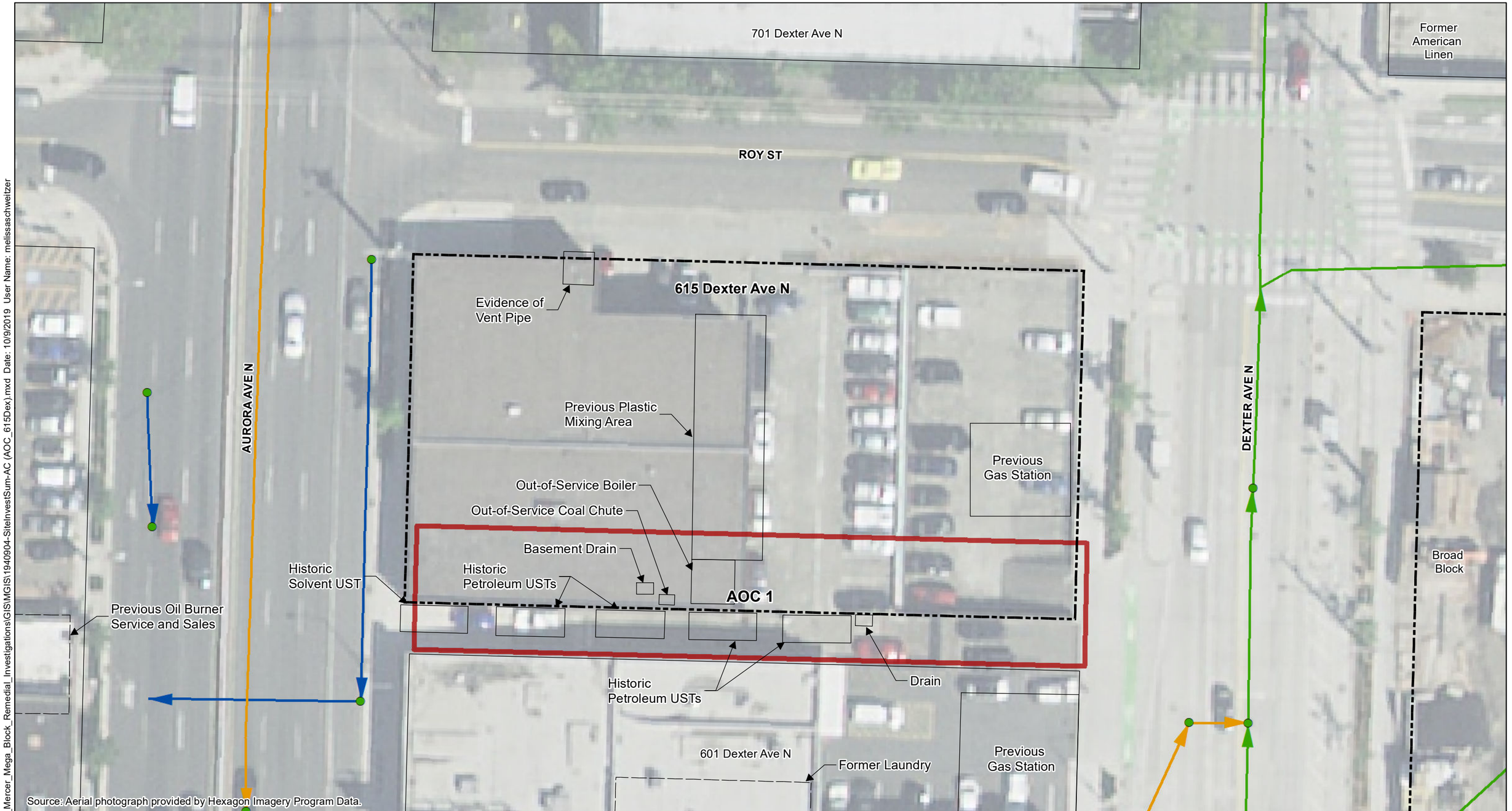
**Surrounding Properties**

19409-04 10/19

HARTCROWSER

Figure 2

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AB (SurroundProp).mxd Date: 10/10/2019 User Name: melissaschweitzer




**Legend**

- Maintenance Hole
- 615 Dexter Area of Concern (AOC 1)
- Other Parcel Boundary
- MMB Parcel Boundary

**Stormwater Lines**

- King County Main
- SPU Drainage Main
- SPU Combined Main

0 15 30 60 Feet

N

Note: Feature locations are approximate.

Mercer Megablock
Seattle, Washington

**Site Map with AOCs**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **3**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AC (AOC_615Dex).mxd Date: 10/9/2019 User Name: melissaschweitzer

Former American Linen

8TH AVE N

ROY ST

Previous Soap and Chemical Manufacturing with Boiler Room

VALLEY ST

615 Dexter Ave N

Previous Gas Station

AOC 1

Previous Gas Station

Former Laundry

DEXTER AVE N

Previous Gas Station

AOC 2

AOC 3

Previous Auto Wrecking

Broad Block

AOC 8

AOC 4

AOC 5

9TH AVE N

AOC 7

AOC 6

Previous Gas Station

MERCER ST

800 Mercer Refridgerator Service, UST

MERCER ST

Building with Oil Burner

8TH AVE N

Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- 615 Dexter Area of Concern (AOC 1)
- Site Specific AOC
- Off-Site American Linen/BMR AOC (AOC 8 and 9)
- King County Main Facility
- Maintenance Hole
- Historical Street Extents
- Other Parcel Boundary
- MMB Parcel Boundary

**Stormwater Lines**

- King County Main
- SPU Drainage Main
- SPU Combined Main

N

0 30 60 120 Feet

Note: Feature locations are approximate.

Mercer Megablock
Seattle, Washington

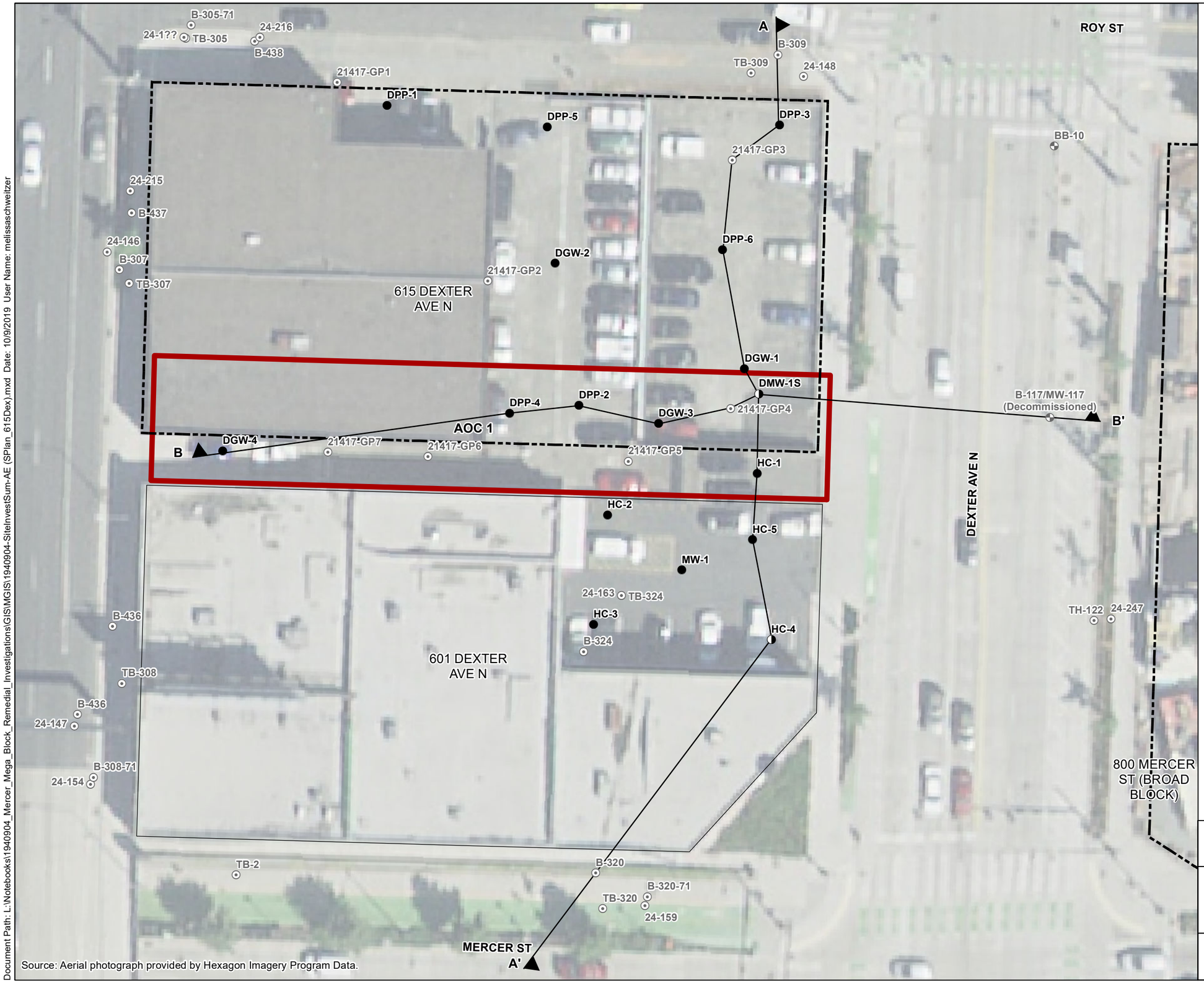
**Site Map with AOCs**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure 4

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AD (AOC_Broad).mxd Date: 10/10/2019 User Name: melissaschweitzer




Legend

**Hart Crowser Explorations**

- Boring
- Monitoring Well

**Historical Explorations**

- Boring
- Monitoring Well

- Cross Section
- 615 Dexter Area of Concern (AOC 1)
- Other Parcel Boundary
- MMB Parcel Boundary

N

0 15 30 60 Feet

Note: Feature locations are approximate.

Mercer Megablock
Seattle, Washington

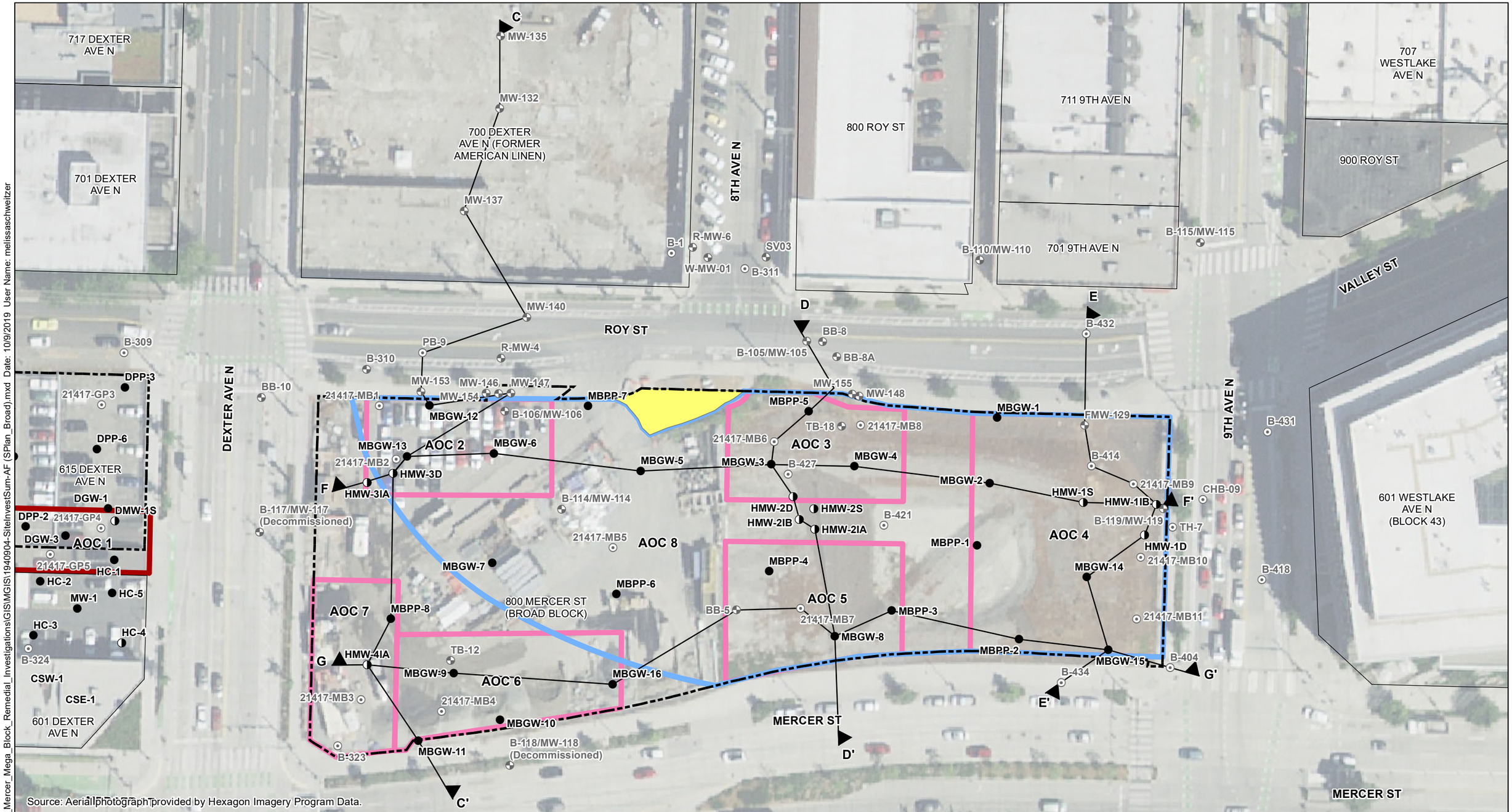
**Site and Exploration Map**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure 5

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AE (SPlan_615Dex).mxd Date: 10/9/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

## Legend

**Hart Crowser Explorations**
- Boring
- Monitoring Well

**Historical Explorations**
- Boring
- Monitoring Well

- 615 Dexter Area of Concern (AOC
- Site Specific
- Off-Site American Linen/BMR AOC (AOC 8 and 9)
- King County Main Facility

- Cross Section Lines
- Other Parcel Boundary
- MMB Parcel Boundary

0 30 60 120 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

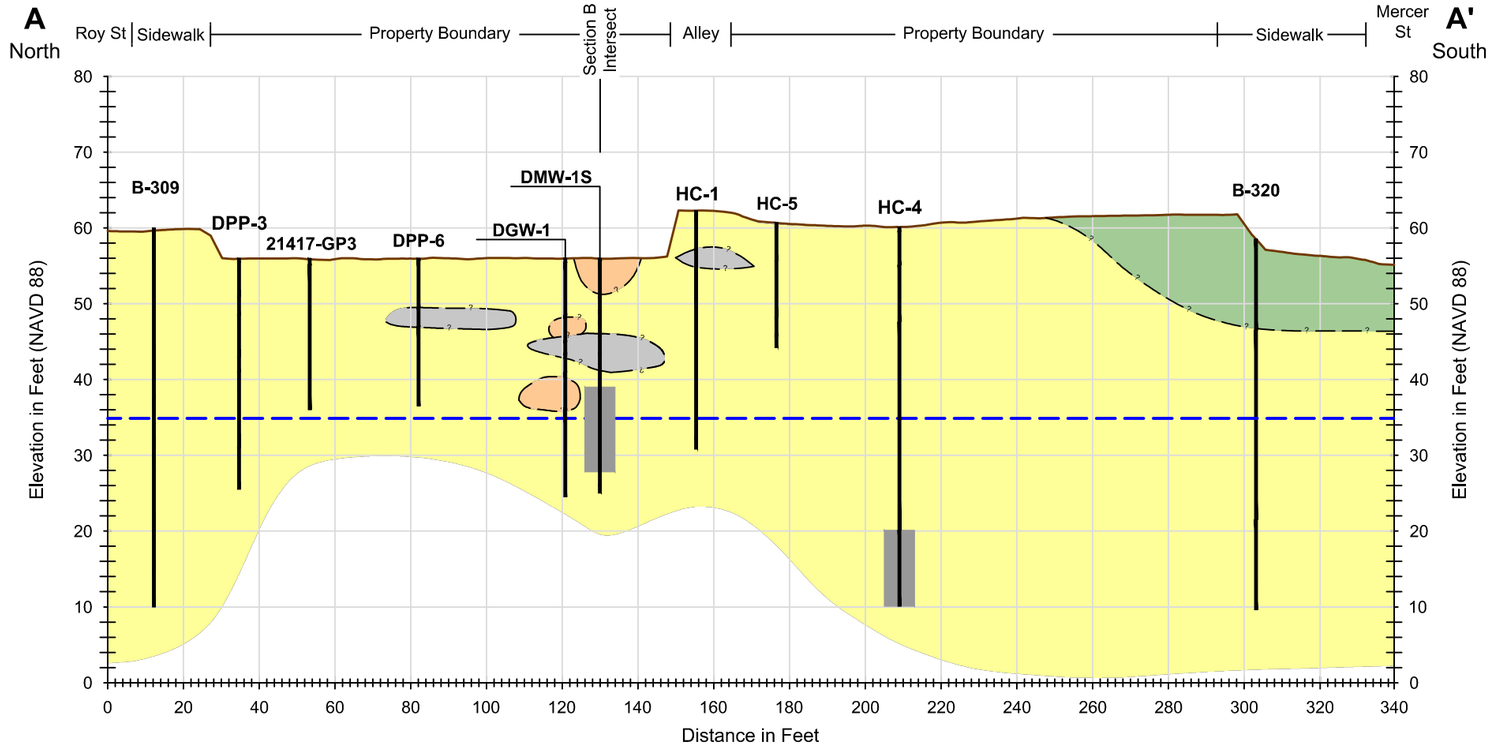
**Site and Exploration Map**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure 6

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AF (SPlan_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

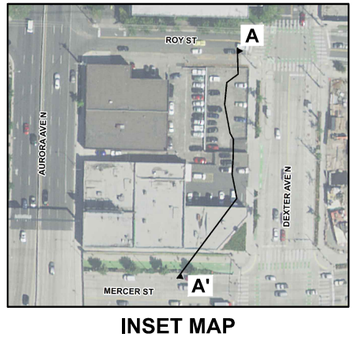
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

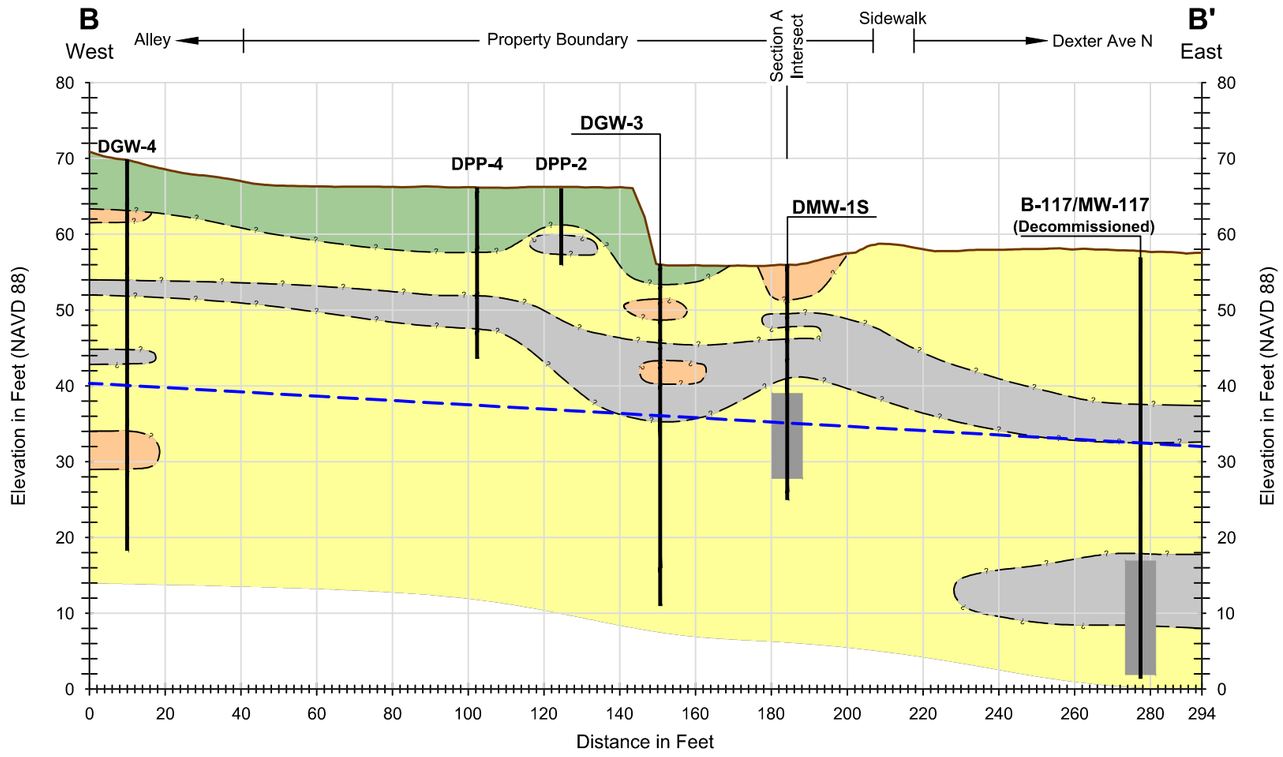
Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section A-A'**

19409-04 10/19

HARTCROWSER

Figure 7




**Legend**

Boring Name — **HMW-2D**

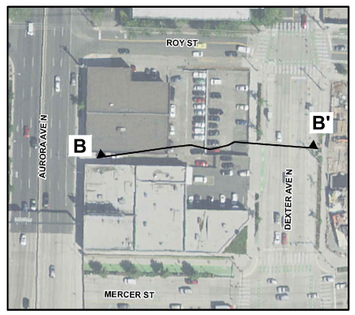
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

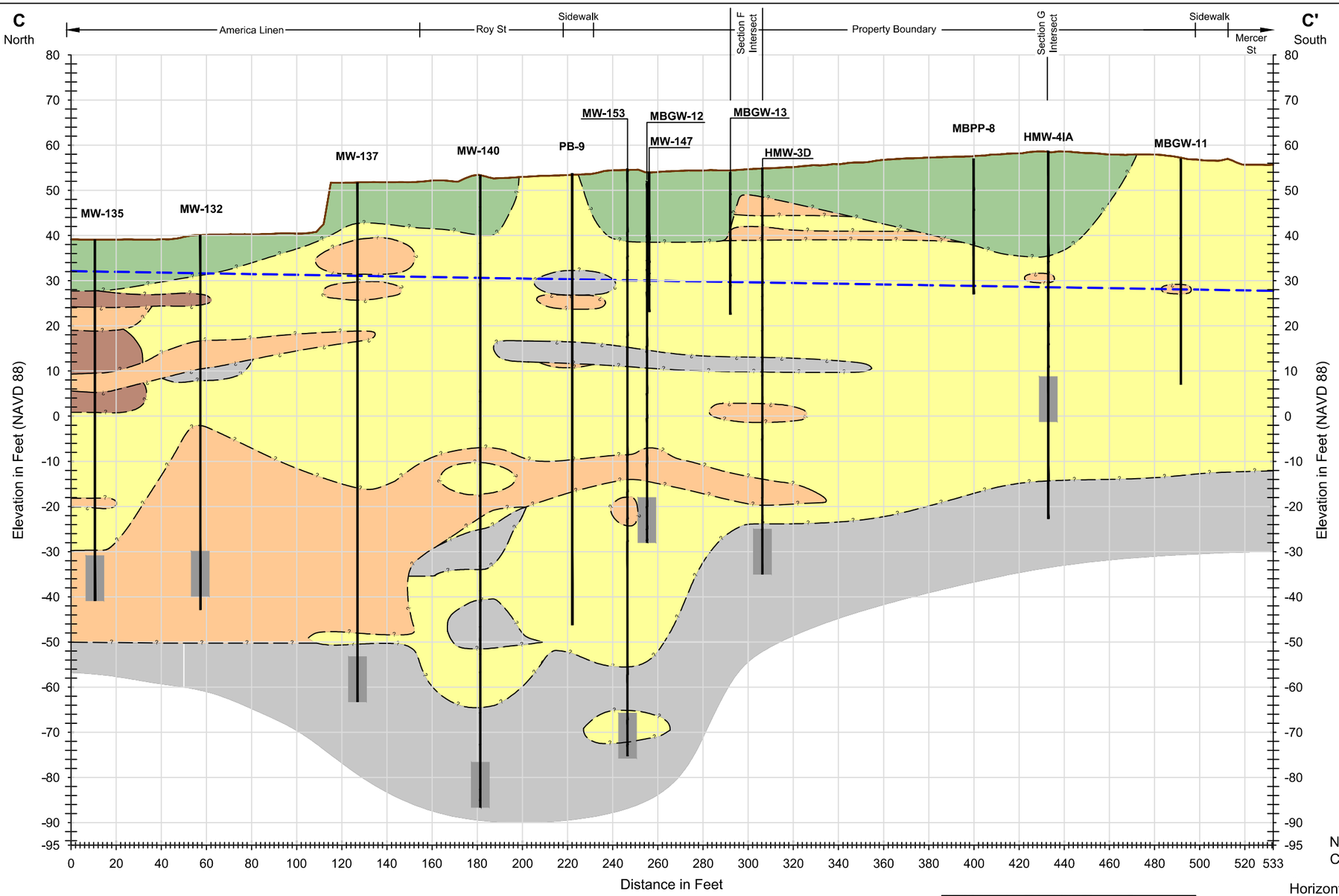
**Generalized Subsurface Cross Section B-B'**

19409-04 10/19

HARTCROWSER

Figure
8

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_B_ENV-NoSamples Date: 10-09-2019 Author: melissaschweitzer




Note: Scale is different on cross-section C-C' to show deep stratigraphy.

**Legend**

Boring Name — **HMW-2D**

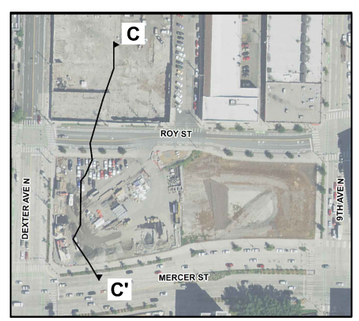
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

Fill | Sand | Gravel | Silty Sand | Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 50 100
0 25 50
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

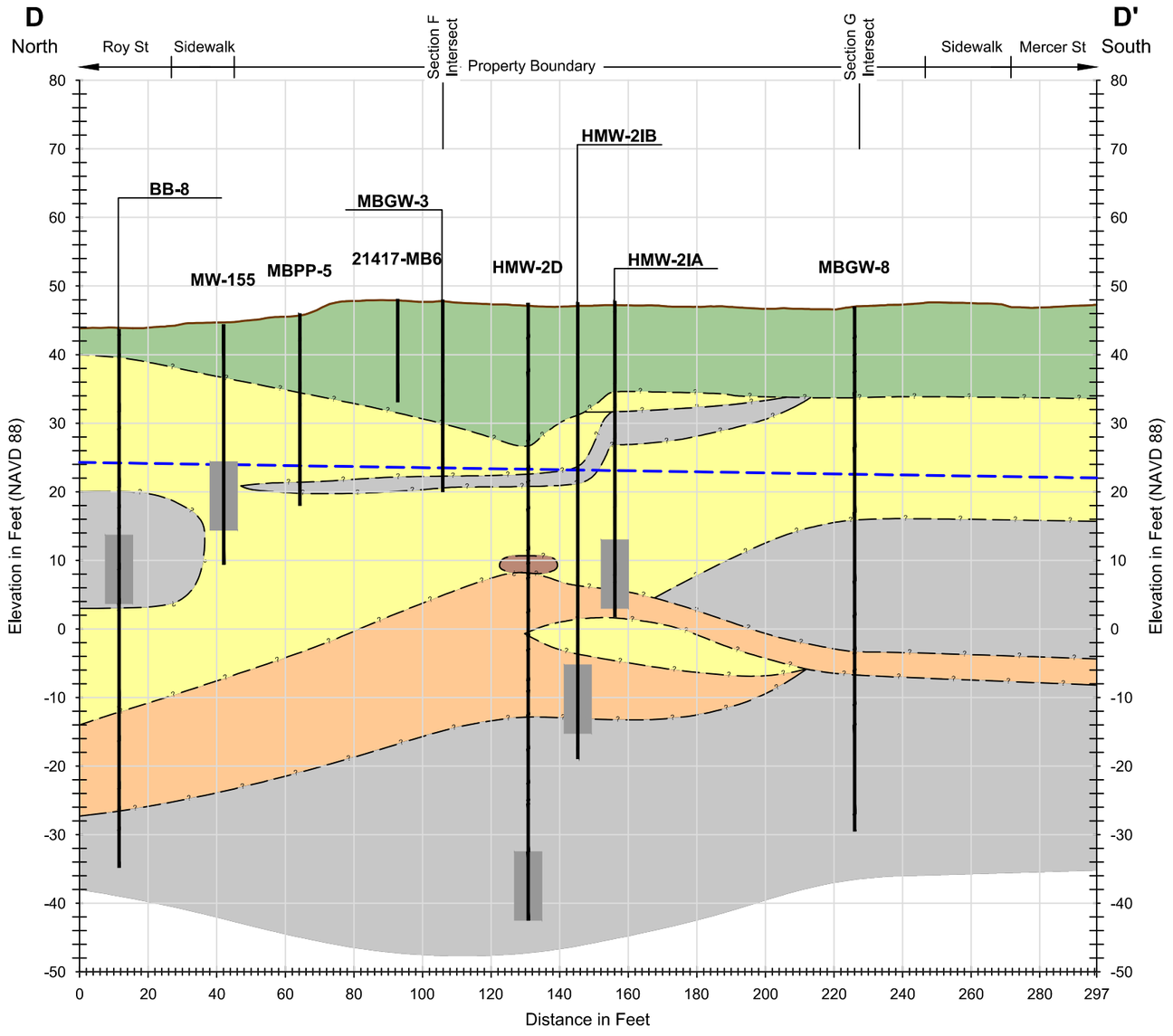
**Generalized Subsurface Cross Section C-C'**

19409-04 10/19

HARTCROWSER

Figure 9

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_C-NoSamples Date: 10-09-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

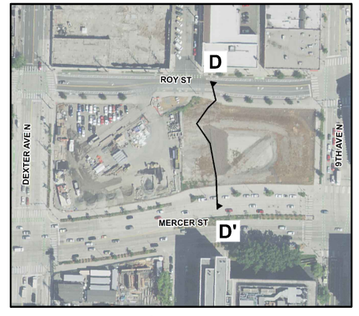
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

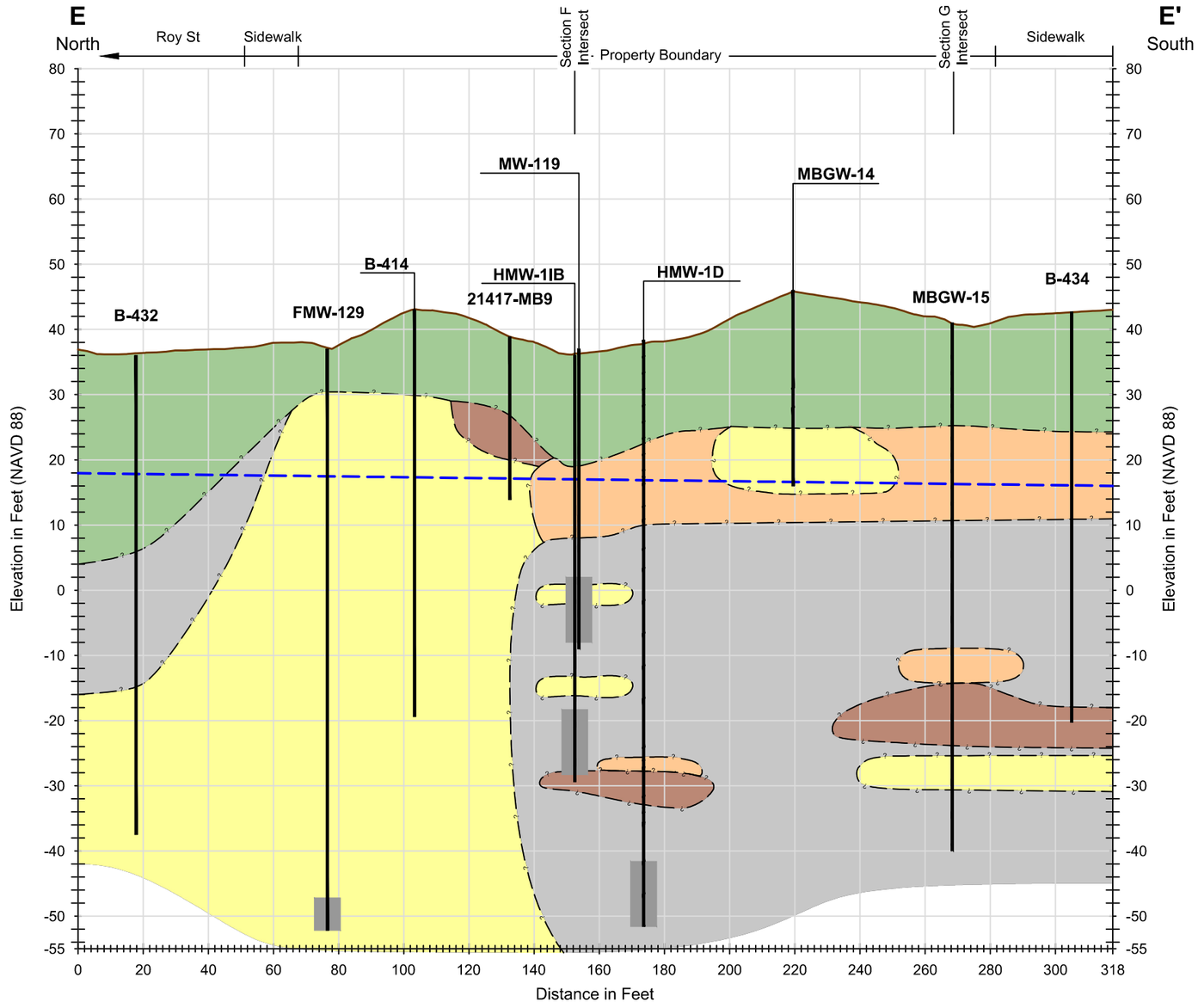
**Generalized Subsurface Cross Section D-D'**

19409-04 10/19

HARTCROWSER

Figure
**10**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_D-NoSamples Date: 10-09-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

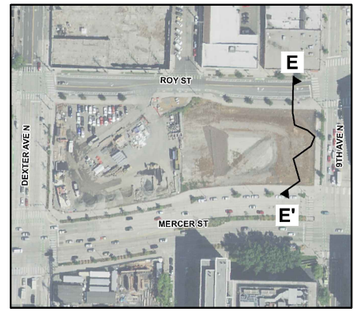
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section E-E'**

19409-04 10/19

HARTCROWSER

Figure 11

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_E-NoSamples Date: 10-09-2019 Author: melissaschweitzer

F

West

F'

East

Section C Intersect

Section D Intersect

Section E Intersect

Property Boundary

Property Boundary

Sidewalk

HMW-3D

HMW-3IA

MBGW-13

MBGW-6

MBGW-5

MBGW-3

MBGW-4

MBGW-2

HMW-1S

HMW-1IB

MW-119

Elevation in Feet (NAVD 88)

Elevation in Feet (NAVD 88)

80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 554

Distance in Feet

**Legend**

Boring Name — **HMW-2D**

Boring Location —

Approximate Groundwater Elevation

Screen Interval —

**Soil Units (Predominant Component)**

Fill

Sand

Gravel

Silty Sand

Silt and/or Clay


**INSET MAP**

Horizontal Scale in Feet

0 40 80

0 20 40

Vertical Scale in Feet

Vertical Exaggeration x 2

Mercer Megablock

Seattle, Washington

**Generalized Subsurface Cross Section F-F'**

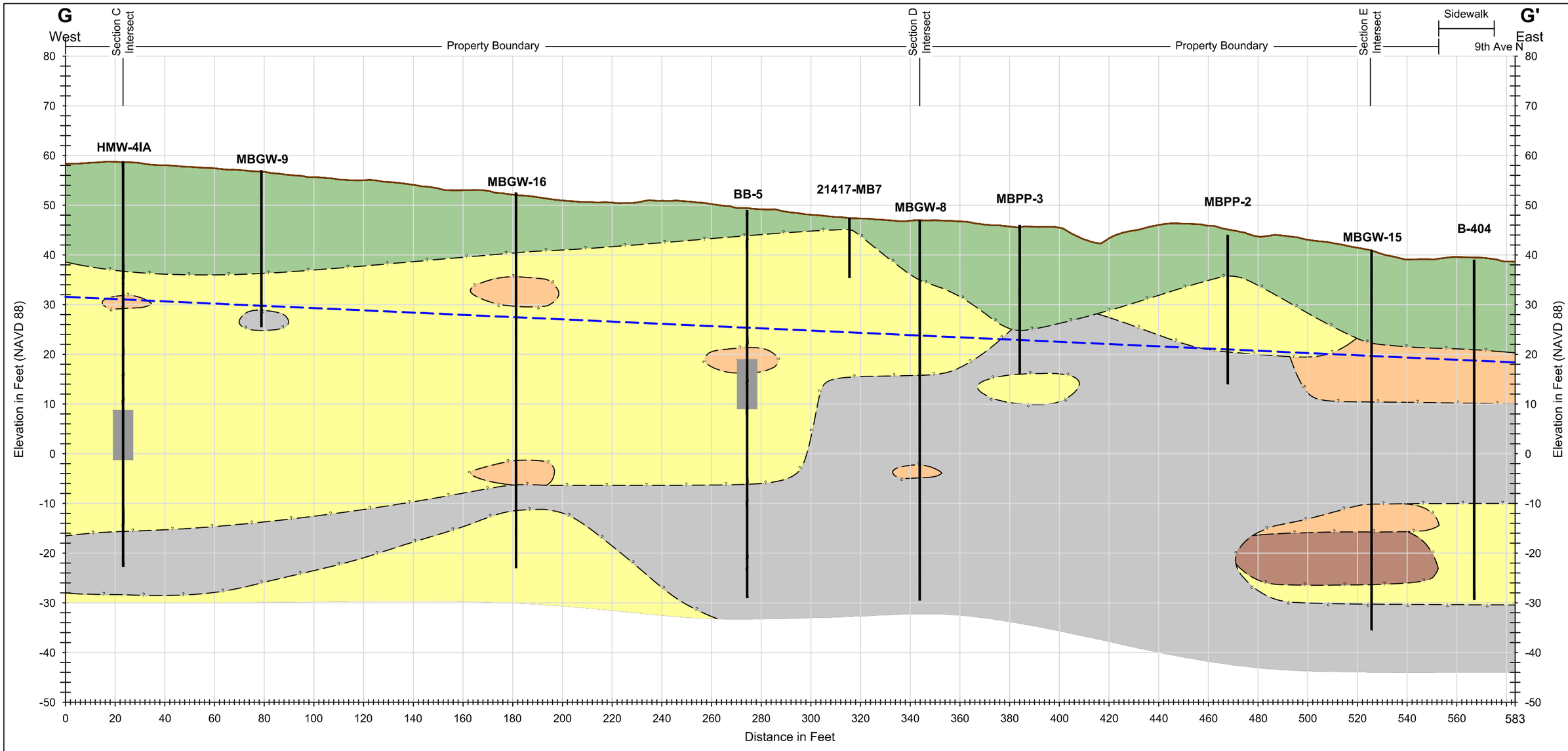
19409-04 10/19

HARTCROWSER

Figure

**12**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_F-NoSamples Date: 10-09-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

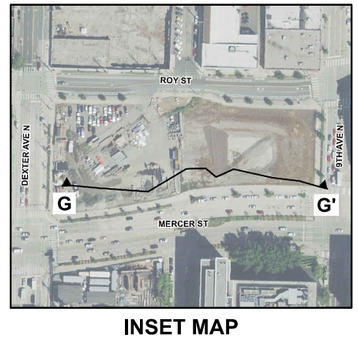
Boring Location

Approximate Groundwater Elevation

Screen Interval

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

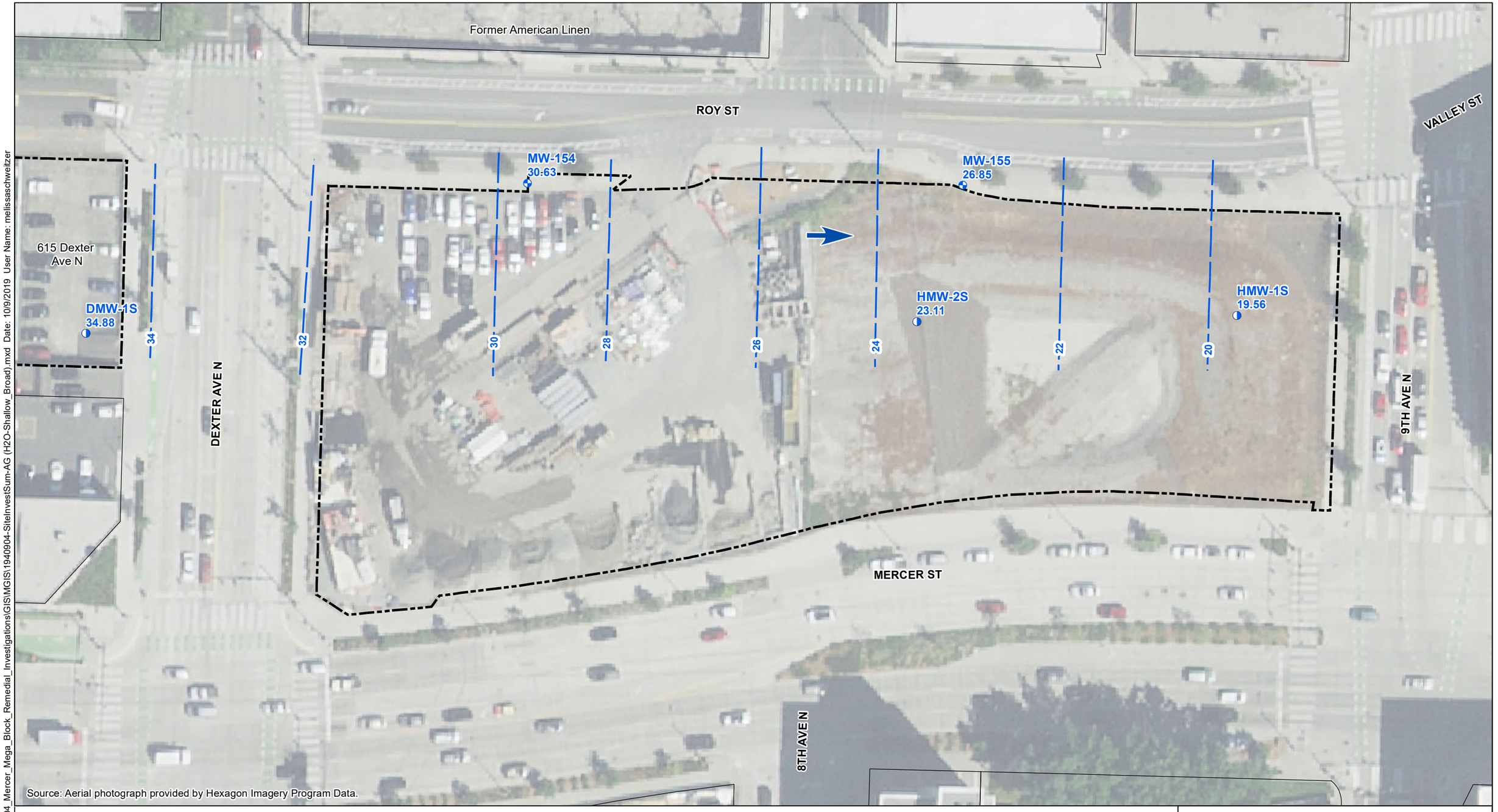
Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section G-G'**

19409-04 10/19

HARTCROWSER

Figure 13




**Legend**

- Monitoring Well with Groundwater Elevation
- Historical Monitoring Well with Groundwater Elevation
- Other Parcel Boundary
- MMB Parcel Boundary
- Groundwater Elevation Contour
- 28.32 Groundwater Elevation, March 2019 (NAVD 88, feet)
- Groundwater Flow Direction

MW-155 water level was excluded in developing the water level contours.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

**Groundwater Elevations Map Shallow**

19409-04 10/19

HARTCROWSER

Figure 14

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AG (H2O-Shallow_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer

Former American Linen

ROY ST

VALLEY ST

MW-146
31.22

615 Dexter Ave N

HMW-3IA
30.71

30

28

26

24

HMW-2IA
28.45

22

20

B-119/MW-119
18.73

DEXTER AVE N

9TH AVE N

MERCER ST

8TH AVE N

Source: Aerial photograph provided by Hexagon Imagery Program Data.

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AH (H2O-Intermediate_A_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer

**Legend**

- Monitoring Well with Groundwater Elevation
- Historical Monitoring Well with Groundwater Elevation
- Other Parcel Boundary
- MMB Parcel Boundary
- Groundwater Elevation Contour
- 28.32 Groundwater Elevation, March 2019 (NAVD 88, feet)
- Groundwater Flow Direction

HMW-2IA and MW-146 water levels were excluded in developing the water level contours.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

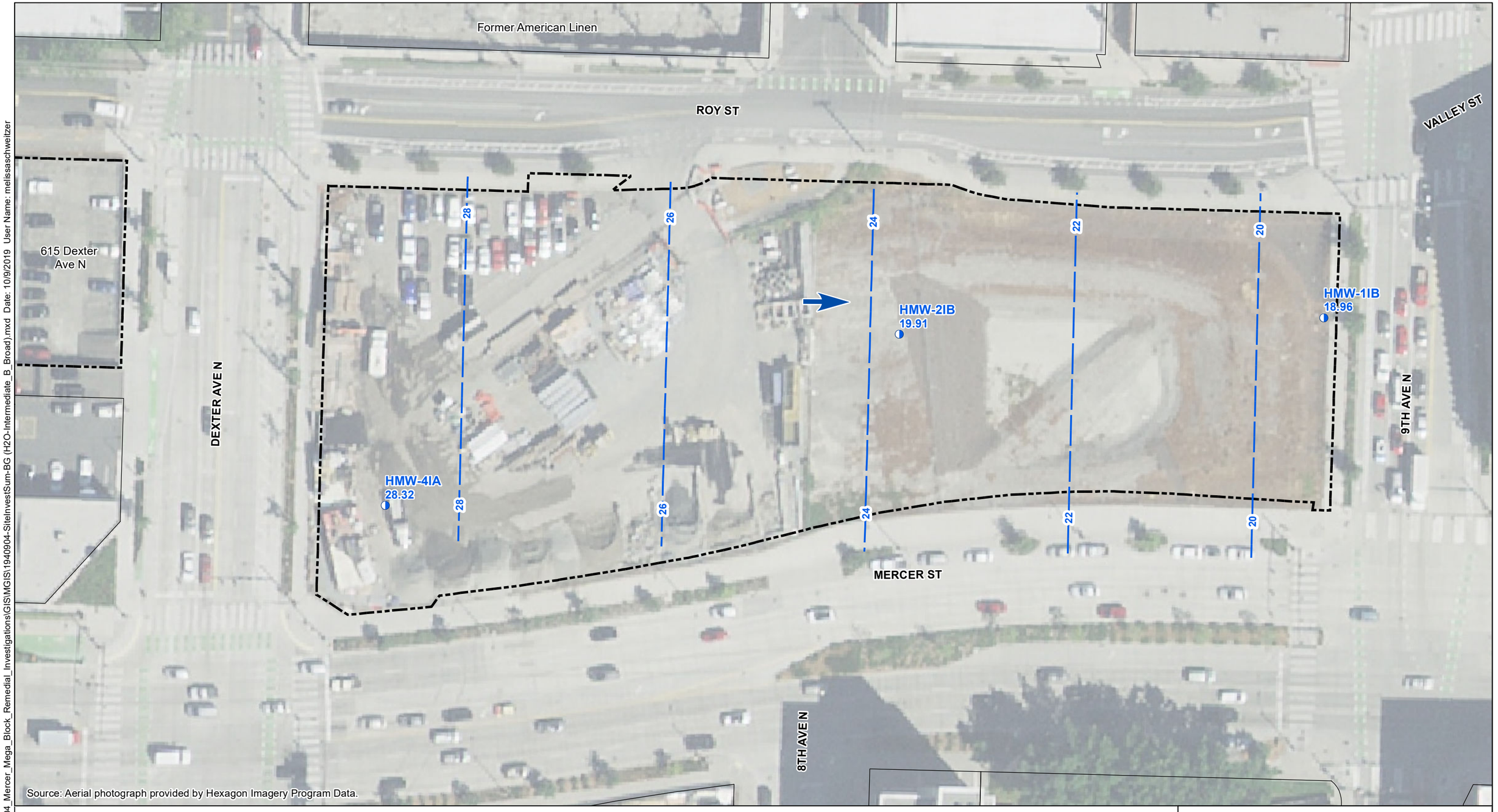
Mercer Megablock
Seattle, Washington

**Groundwater Elevations Map**
**Intermediate A**

19409-04 10/19

HARTCROWSER

Figure
**15**




**Legend**

- Monitoring Well with Groundwater Elevation
- Other Parcel Boundary
- MMB Parcel Boundary
- Groundwater Elevation Contour
- 28.32 Groundwater Elevation, March 2019 (NAVD 88, feet)
- Groundwater Flow Direction

HMW-2IB water level was excluded in developing the water level contours.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

**Groundwater Elevations Map Intermediate B**

19409-04 10/19

HARTCROWSER

Figure 16

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-BG (H2O-Intermediate_B_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer


**Legend**

- Monitoring Well with Groundwater Elevation
- Historical Monitoring Well with Groundwater Elevation
- Other Parcel Boundary
- MMB Parcel Boundary

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

**Groundwater Elevations Map**
**Deep**

19409-04 10/19

HARTCROWSER

Figure
**17**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AI (H2O-Deep_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer

MW-137
Former American Linen
R-MW-6
W-MW-01
SV03
B-110/MW-110
B-115/MW-115
8TH AVE N
MW-140
ROY ST
B-105/MW-105
BB-8
BB-8A
VALLEY ST
R-MW-4
B-310
MW-153
MW-154
MW-147
MW-146
B-106/MW-106
BB-10
MW-155
MW-148
TB-18
FMW-129
615 Dexter Ave N
HMW-3D
6.8 x $10^{-5}$ cm/sec
0.2 ft/day
HMW-2D
5.5 x $10^{-5}$ cm/sec
0.2 ft/day
HMW-2S
2.1 x $10^{-3}$ cm/sec
5.9 ft/day
HMW-1IB
6.8 x $10^{-4}$ cm/sec
1.9 ft/day
DMW-1S
5.6 x $10^{-3}$ cm/sec
15.9 ft/day
DEXTER AVE N
B-114/MW-114
B-117/MW-117
(Decommissioned)
HMW-3IA
9.1 x $10^{-5}$ cm/sec
0.2 ft/day
HMW-1S
1.3 x $10^{-4}$ cm/sec
0.4 ft/day
B-119/MW-119
9TH AVE N
HMW-2IB
5.0 x $10^{-4}$ cm/sec
1.4 ft/day
HMW-2IA
8.0 x $10^{-4}$ cm/sec
2.3 ft/day
HMW-1D
1.5 x $10^{-3}$ cm/sec
4.3 ft/day
BB-5
HC-4
HMW-4IA
2.2 x $10^{-4}$ cm/sec
0.6 ft/day
TB-12
MERCER ST
B-118/MW-118
(Decommissioned)

Source: Aerial photograph provided by Hexagon Imagery Program Data.

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AS (GWMonSlug_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer

**Legend**

**Hart Crowser Explorations**
- Monitoring Well

**Historical Explorations**
- Monitoring Well

- Other Parcel Boundary
- MMB Parcel Boundary

Hydraulic conductivity based on slug testing.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

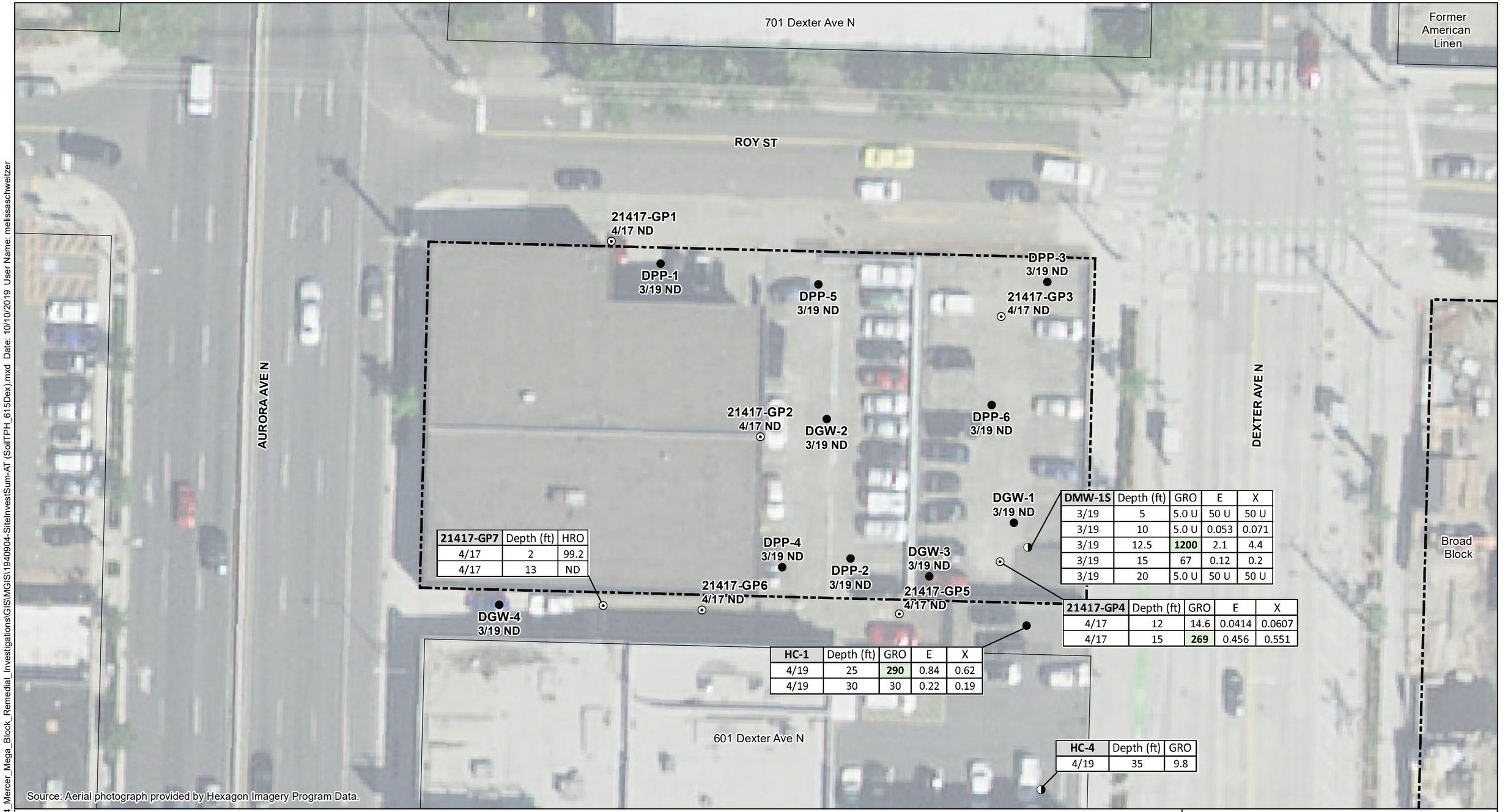
Mercer Megablock
Seattle, Washington

**Hydraulic Conductivity Based on Slug Tests**

19409-04 10/19

HARTCROWSER

Figure 18




| 21417-GP7 | Depth (ft) | HRO |
|---|---|---|
| 4/17 | 2 | 99.2 |
| 4/17 | 13 | ND |

| DMW-1S | Depth (ft) | GRO | E | X |
|---|---|---|---|---|
| 3/19 | 5 | 5.0 U | 50 U | 50 U |
| 3/19 | 10 | 5.0 U | 0.053 | 0.071 |
| 3/19 | 12.5 | **1200** | 2.1 | 4.4 |
| 3/19 | 15 | 67 | 0.12 | 0.2 |
| 3/19 | 20 | 5.0 U | 50 U | 50 U |

| 21417-GP4 | Depth (ft) | GRO | E | X |
|---|---|---|---|---|
| 4/17 | 12 | 14.6 | 0.0414 | 0.0607 |
| 4/17 | 15 | **269** | 0.456 | 0.551 |

| HC-1 | Depth (ft) | GRO | E | X |
|---|---|---|---|---|
| 4/19 | 25 | **290** | 0.84 | 0.62 |
| 4/19 | 30 | 30 | 0.22 | 0.19 |

| HC-4 | Depth (ft) | GRO |
|---|---|---|
| 4/19 | 35 | 9.8 |

Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical
- Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected |
| cPAH | Carcinogenic polycyclic aromatic hydrocarbons |
| TEQ | Total toxicity equivalence |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 15 30 60 Feet

N

Mercer Megablock
Seattle, Washington

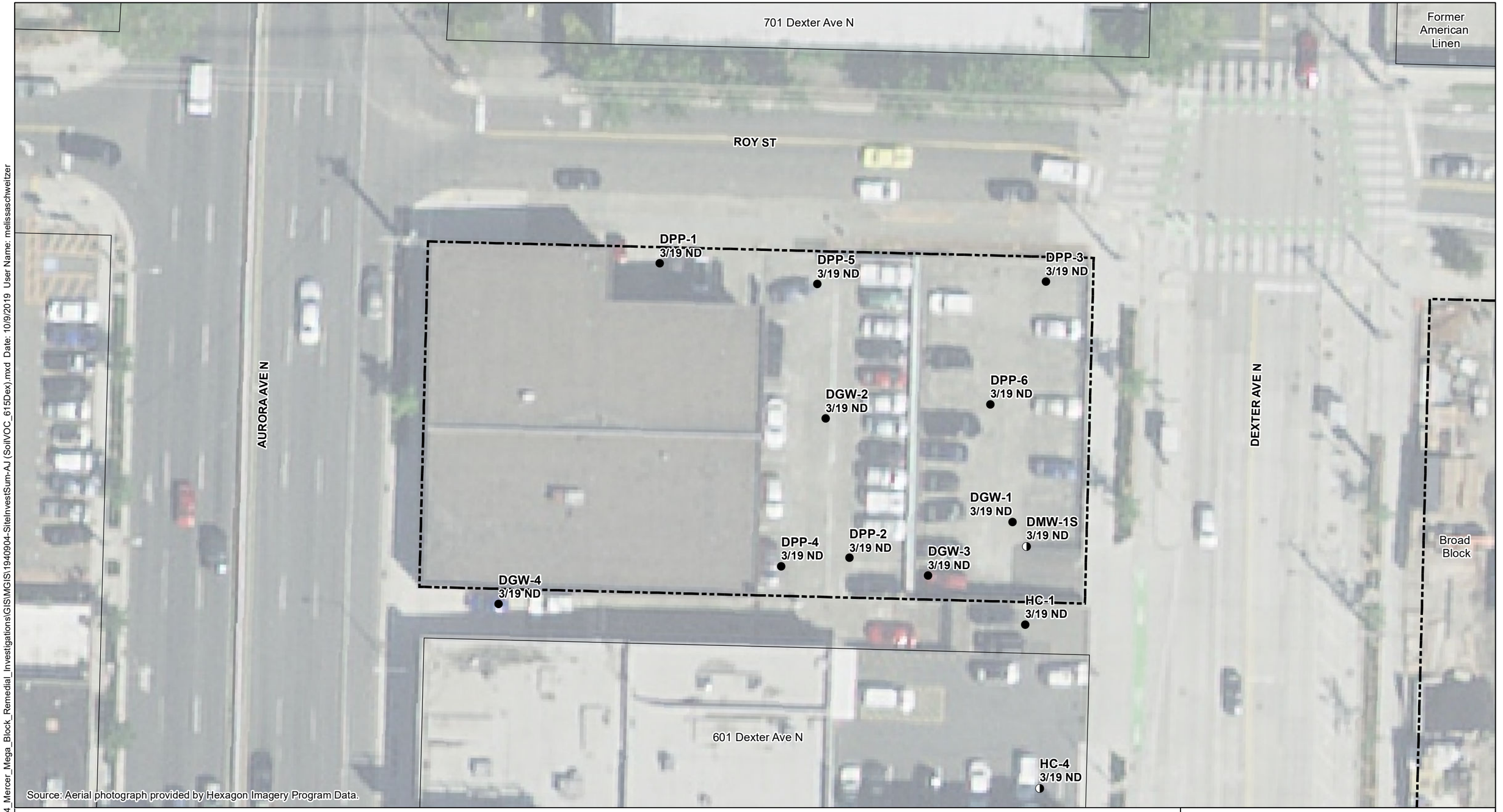
**Chemical Concentrations (TPH) Detected in Soil**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **19**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AT (SoilTPH_615Dex).mxd Date: 10/10/2019 User Name: melissaschweitzer




**Legend**

- ● Boring with Chemical Analysis
- ◑ Monitoring Well with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 15 30 60 Feet

N

Mercer Megablock
Seattle, Washington

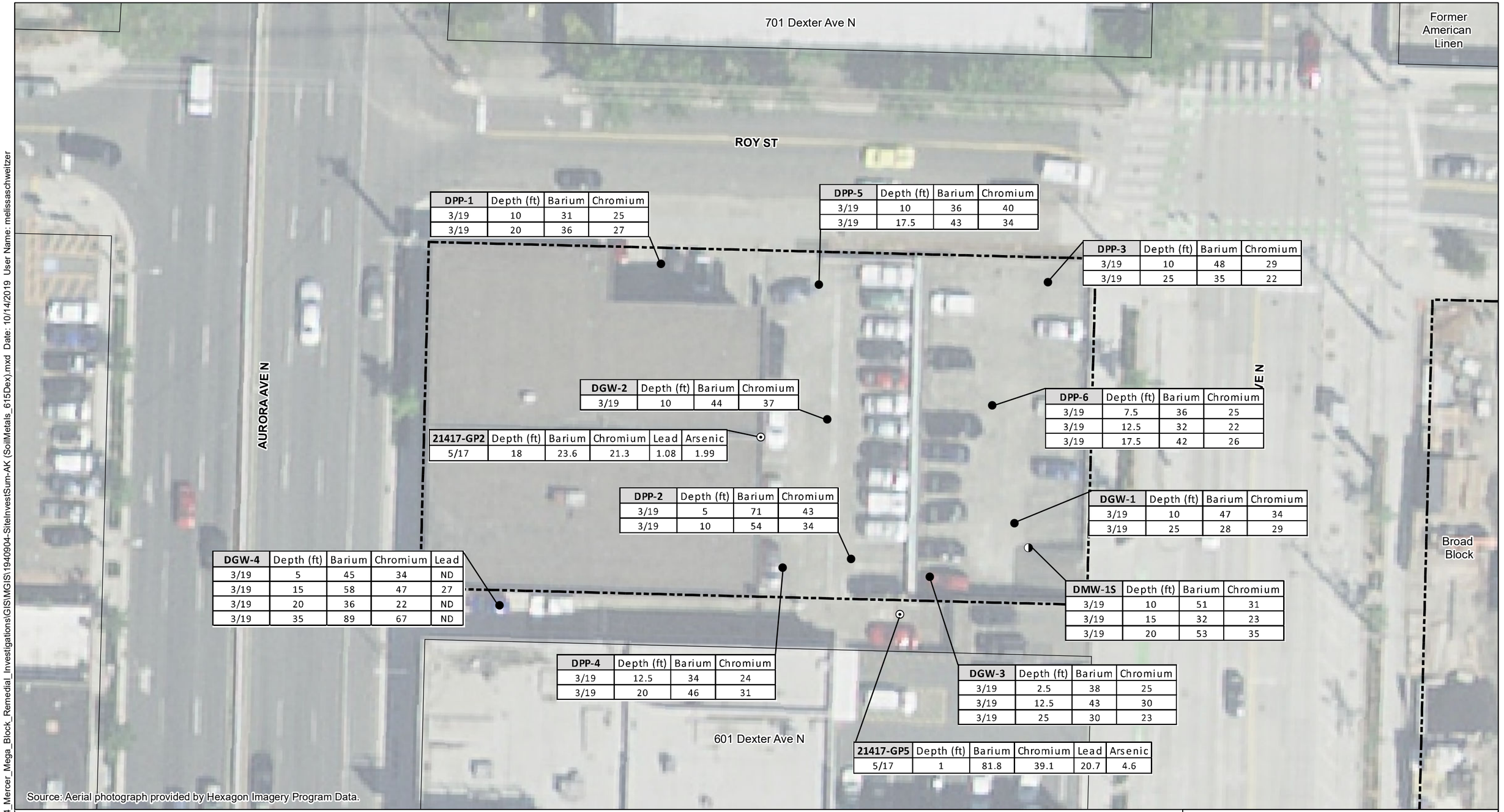
**Chemical Concentrations (cVOCs) Detected in Soil**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **20**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AJ (SoilVOC_615Dex).mxd Date: 10/9/2019 User Name: melissaschweitzer




| DPP-1 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 31 | 25 |
| 3/19 | 20 | 36 | 27 |

| DPP-5 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 36 | 40 |
| 3/19 | 17.5 | 43 | 34 |

| DPP-3 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 48 | 29 |
| 3/19 | 25 | 35 | 22 |

| DGW-2 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 44 | 37 |

| 21417-GP2 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 5/17 | 18 | 23.6 | 21.3 | 1.08 | 1.99 |

| DPP-6 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 7.5 | 36 | 25 |
| 3/19 | 12.5 | 32 | 22 |
| 3/19 | 17.5 | 42 | 26 |

| DPP-2 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 5 | 71 | 43 |
| 3/19 | 10 | 54 | 34 |

| DGW-1 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 47 | 34 |
| 3/19 | 25 | 28 | 29 |

| DGW-4 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 5 | 45 | 34 | ND |
| 3/19 | 15 | 58 | 47 | 27 |
| 3/19 | 20 | 36 | 22 | ND |
| 3/19 | 35 | 89 | 67 | ND |

| DMW-1S | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 51 | 31 |
| 3/19 | 15 | 32 | 23 |
| 3/19 | 20 | 53 | 35 |

| DPP-4 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 12.5 | 34 | 24 |
| 3/19 | 20 | 46 | 31 |

| DGW-3 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 2.5 | 38 | 25 |
| 3/19 | 12.5 | 43 | 30 |
| 3/19 | 25 | 30 | 23 |

| 21417-GP5 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 5/17 | 1 | 81.8 | 39.1 | 20.7 | 4.6 |

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

- mg/kg Milligram per Kilogram
- ND Not Detected
- U Not detected at or above the specified concentration
- J Analyte was positively identified and the reported result is an estimate

| Metals (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Arsenic | 20 |
| Barium | 1600 |
| Chromium | 2000 |
| Lead | 250 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Feature locations are approximate.

0 15 30 60 Feet

N

Mercer Megablock
Seattle, Washington

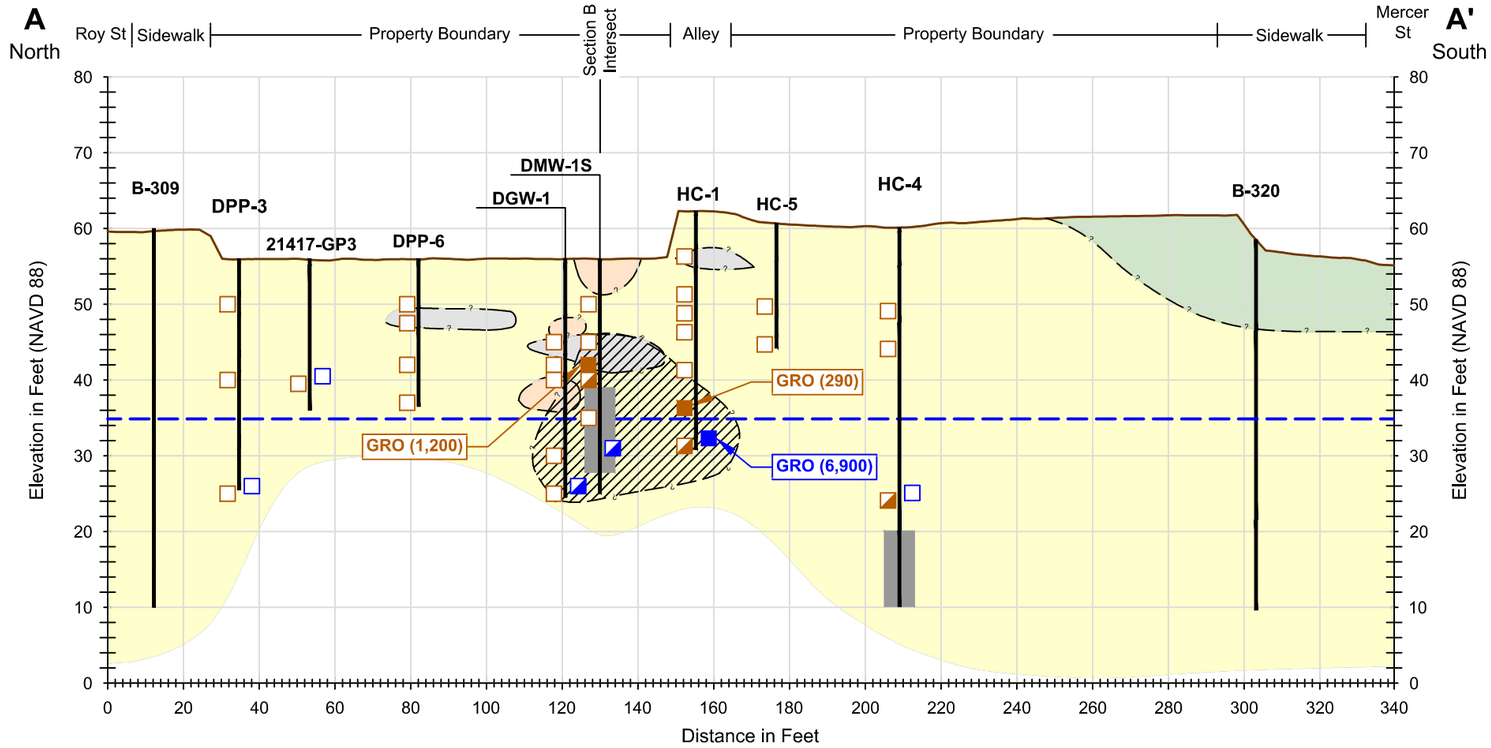
**Chemical Concentrations (Metals) Detected in Soil**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **21**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AK (SoilMetals_615Dex).mxd Date: 10/14/2019 User Name: melissaschweitzer




**Legend**

Boring Name — HMW-2D

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

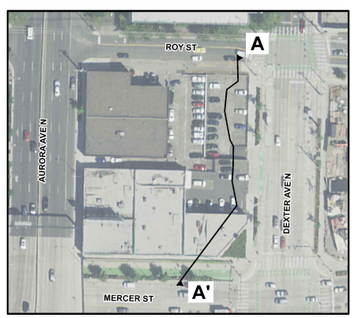
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section A-A'**
**TPH**
**615 Dexter**

19409-04 10/19

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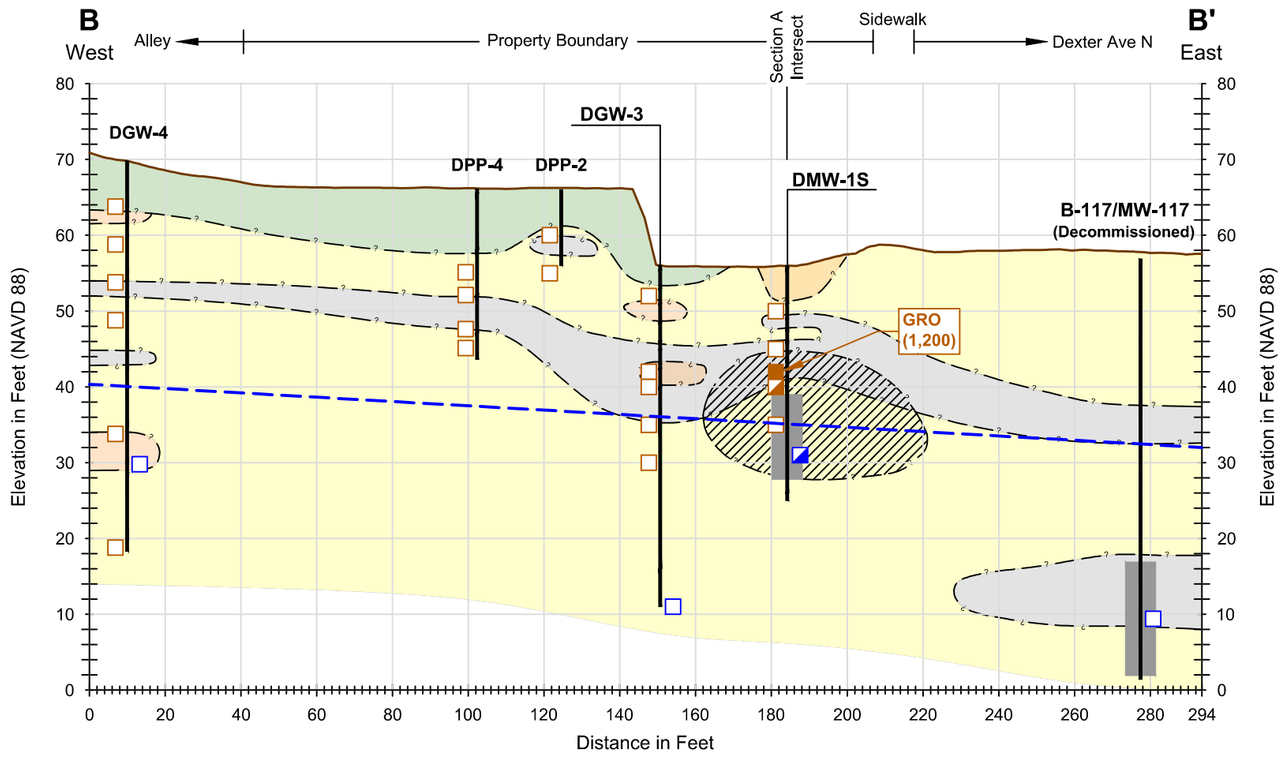
Figure **22**




## Legend

Boring Name — **HMW-2D**

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

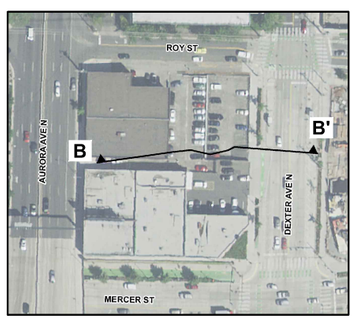
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

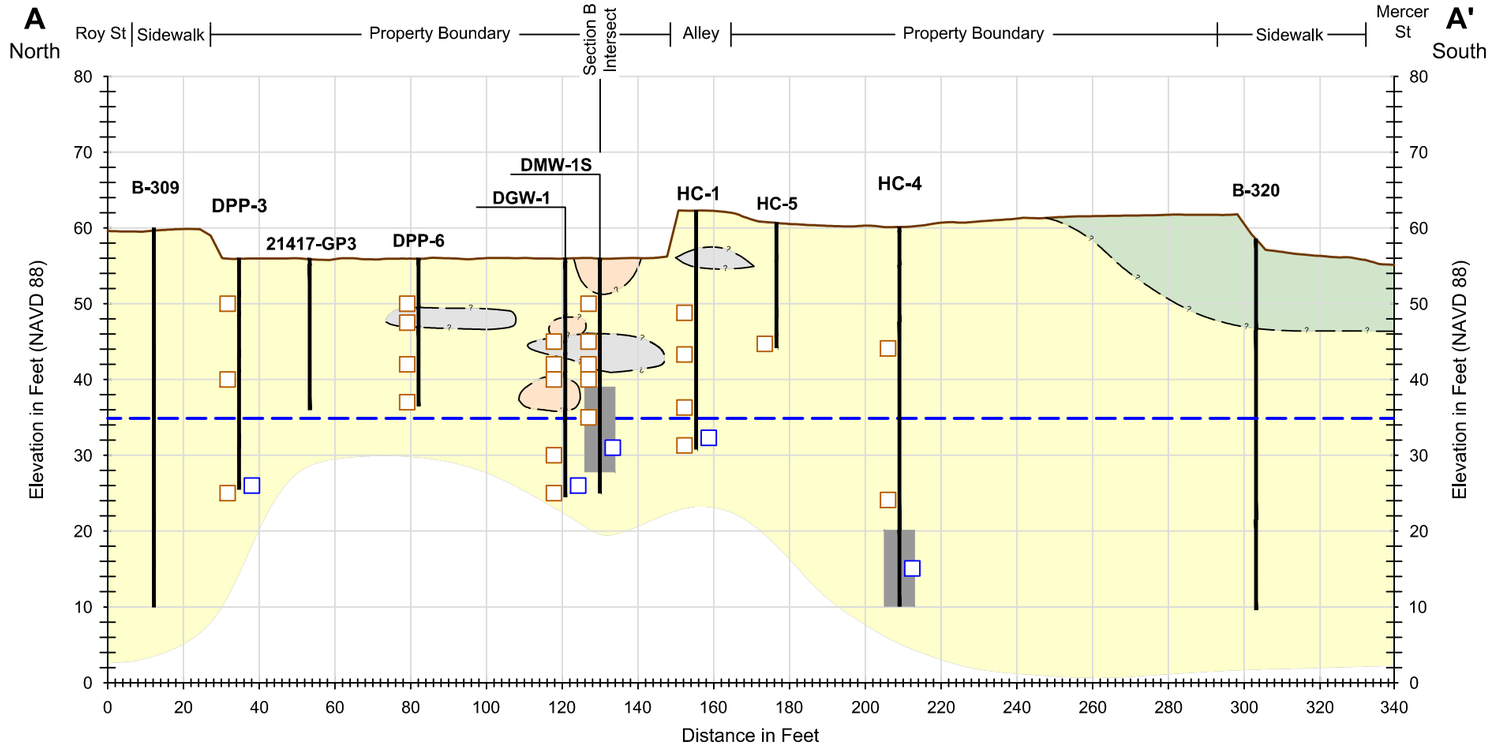
Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section B-B'**
**TPH**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **23**




**Legend**

Boring Name — HMW-2D

Boring Location

Screen Interval

Approximate Groundwater Elevation

Soil (mg/kg) Non-Detection Sample

Soil (mg/kg) Sample Below MTCA Cleanup Levels

Soil (mg/kg) Sample Above MTCA Cleanup Levels

Groundwater (µg/L) Non-Detection Sample

Groundwater (µg/L) Sample Below MTCA Cleanup Levels

Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

Fill

Sand

Gravel

Silty Sand

Silt and/or Clay

Inferred Impacted Zone

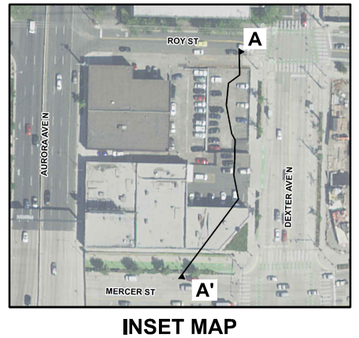
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

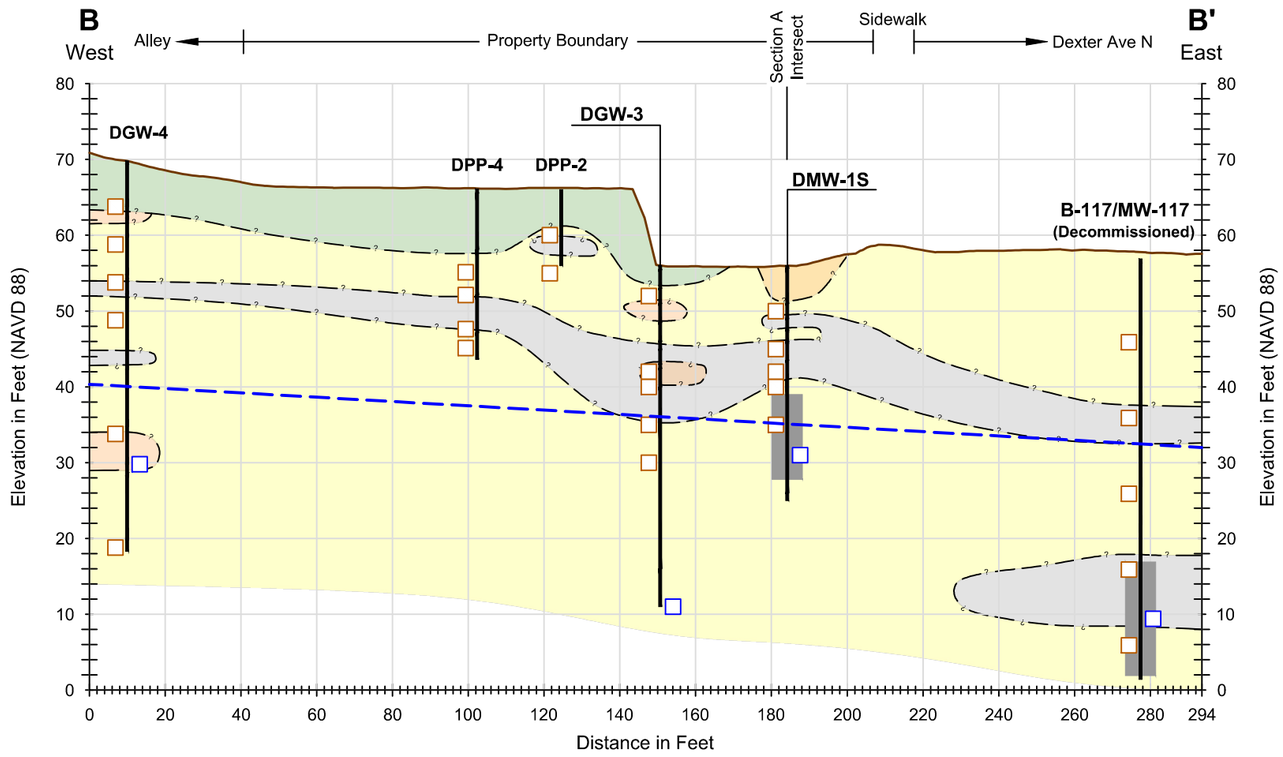
**Generalized Subsurface Cross Section A-A'**
**cVOCs**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure
**24**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_A_ENV-cVOCsSamples Date: 10-10-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

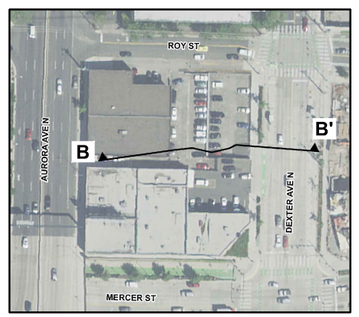
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

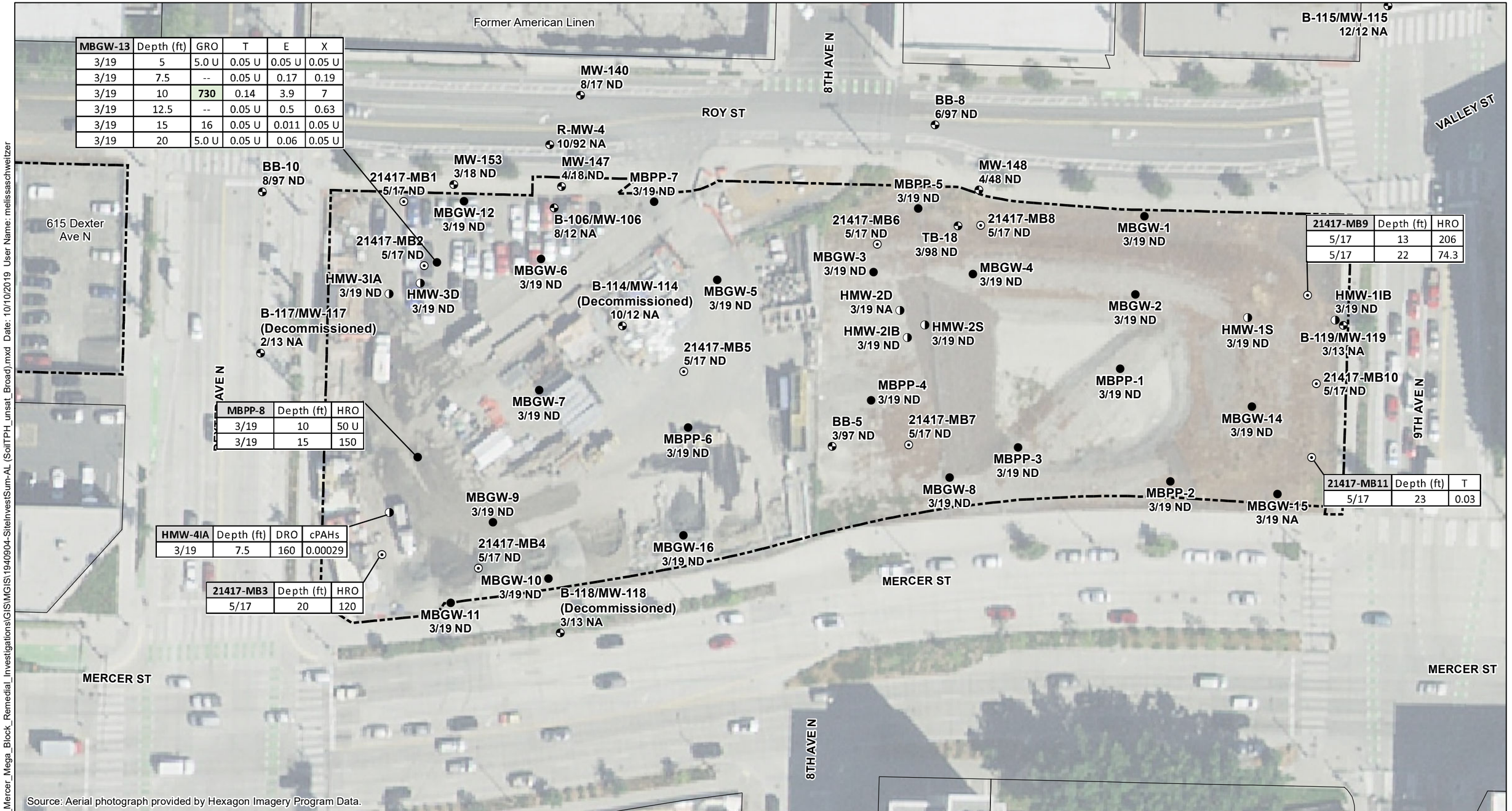
**Generalized Subsurface Cross Section B-B'**
**cVOCs**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure
**25**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_B_ENV-cVOCsSamples Date: 10-09-2019 Author: melissaschweitzer




| MBGW-13 | Depth (ft) | GRO | T | E | X |
|---|---|---|---|---|---|
| 3/19 | 5 | 5.0 U | 0.05 U | 0.05 U | 0.05 U |
| 3/19 | 7.5 | -- | 0.05 U | 0.17 | 0.19 |
| 3/19 | 10 | 730 | 0.14 | 3.9 | 7 |
| 3/19 | 12.5 | -- | 0.05 U | 0.5 | 0.63 |
| 3/19 | 15 | 16 | 0.05 U | 0.011 | 0.05 U |
| 3/19 | 20 | 5.0 U | 0.05 U | 0.06 | 0.05 U |

| 21417-MB9 | Depth (ft) | HRO |
|---|---|---|
| 5/17 | 13 | 206 |
| 5/17 | 22 | 74.3 |

| MBPP-8 | Depth (ft) | HRO |
|---|---|---|
| 3/19 | 10 | 50 U |
| 3/19 | 15 | 150 |

| 21417-MB11 | Depth (ft) | T |
|---|---|---|
| 5/17 | 23 | 0.03 |

| HMW-4IA | Depth (ft) | DRO | cPAHs |
|---|---|---|---|
| 3/19 | 7.5 | 160 | 0.00029 |

| 21417-MB3 | Depth (ft) | HRO |
|---|---|---|
| 5/17 | 20 | 120 |

Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected |
| NA | Not Analyzed |
| cPAH | Carcinogenic polycyclic aromatic hydrocarbons |
| TEQ | Total toxicity equivalence |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

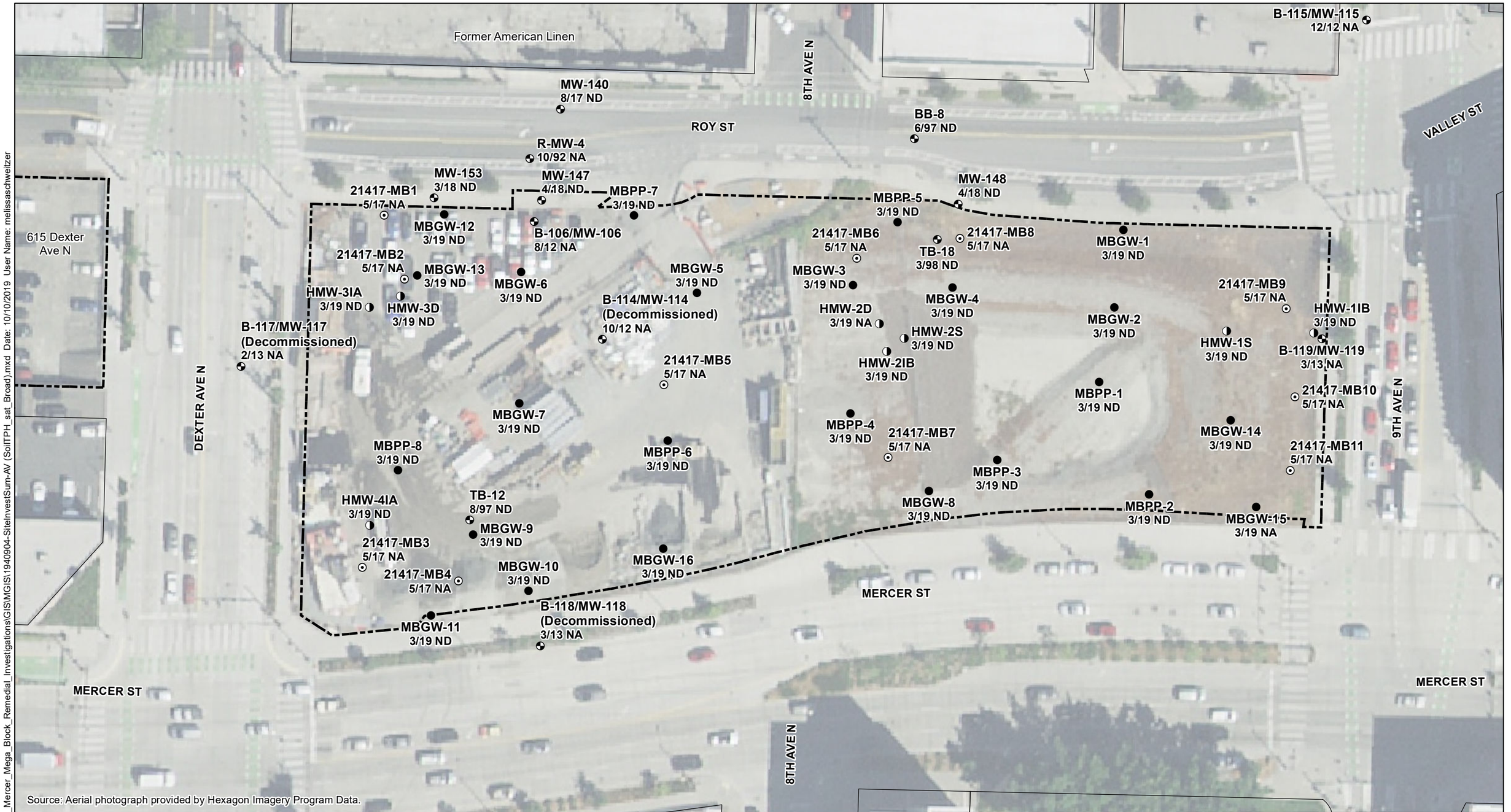
**Chemical Concentrations (TPH) Detected in Soil Above Water Table Broad Block**

19409-04 10/19

HARTCROWSER

Figure 26

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AL (SoilTPH_unsat_Broad).mxd Date: 10/10/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected |
| NA | Not Analyzed |
| cPAH | Carcinogenic polycyclic aromatic hydrocarbons |
| TEQ | Total toxicity equivalence |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

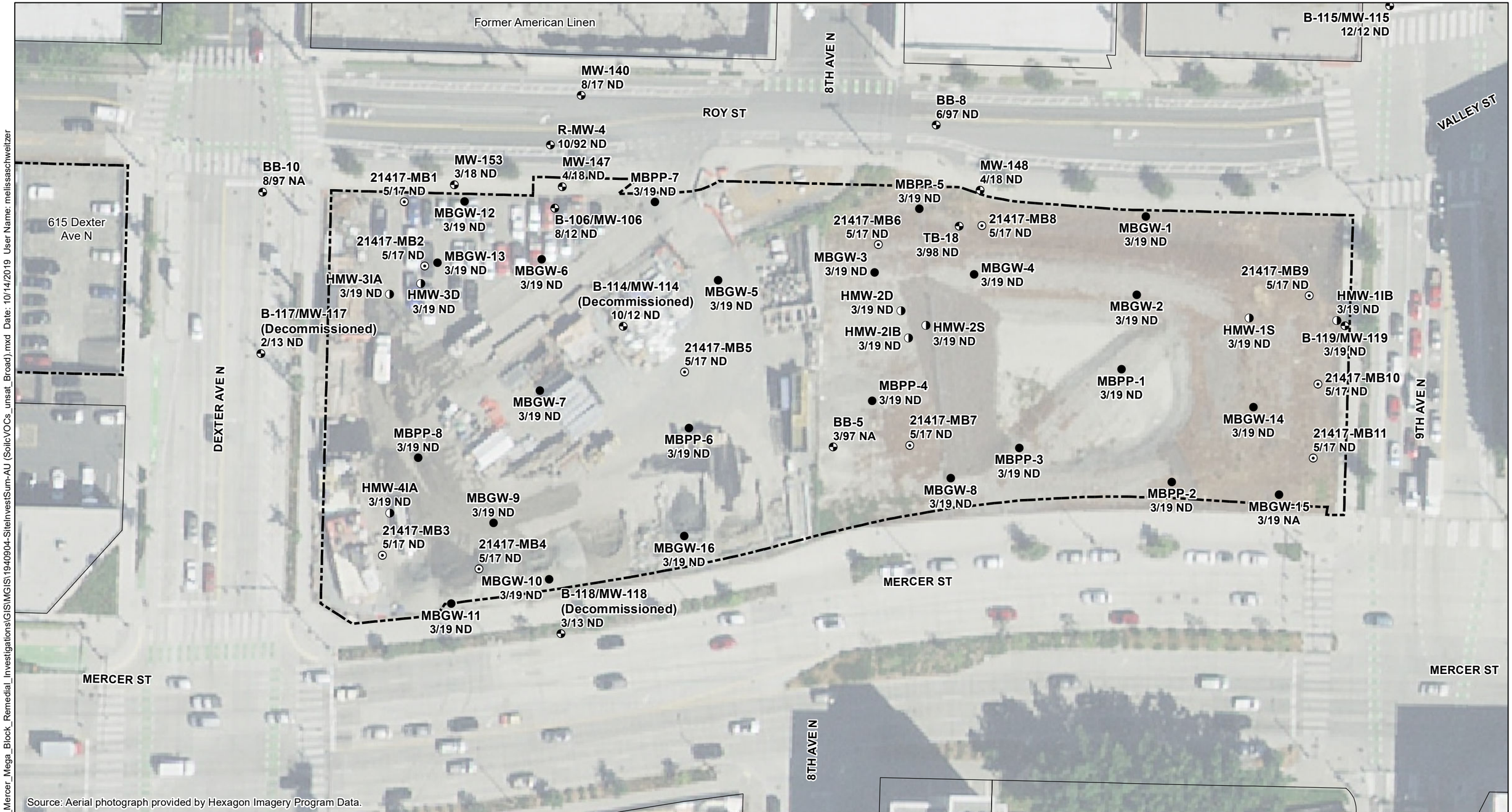
**Chemical Concentrations (TPH) Detected in Soil Below Water Table Broad Block**

19409-04 10/19

HARTCROWSER

Figure **27**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AV (SoilTPH_sat_Broad).mxd Date: 10/10/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected Above Cleanup Level |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

**Chemical Concentrations (cVOCs) Detected in Soil Above Water Table Broad Block**

19409-04 10/19

HARTCROWSER

Figure 28

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AU (SoilcVOCs_unsat_Broad).mxd Date: 10/14/2019 User Name: melissaschweitzer

| MW-140 | Depth (ft) | VC | tDCE | cDCE | TCE | PCE |
|---|---|---|---|---|---|---|
| 8/17 | 35 | 0.0107 J | 0.00769 U | **0.387** | **0.629** | **15.1** |
| 8/17 | 45 | 0.0016 | 0.000282 U | 0.0431 | **0.0793** | **4.27** |
| 8/17 | 55 | 0.099 | 0.0005 J | **0.13** | **0.0496** | **1.56** |
| 8/17 | 65-140 | ND | ND | ND | ND | ND |

| MW-148 | Depth (ft) | PCE | TCE | cDCE | VC |
|---|---|---|---|---|---|
| 4/18 | 40 | 0.000801 J | 0.000551 J | 0.00113 | 0.00109 U |
| 4/18 | 50 | 0.0011 U | 0.0011 U | 0.0011 U | 0.0011 U |
| 4/18 | 60 | 0.00126 U | 0.00126 U | 0.00126 U | 0.00126 U |
| 4/18 | 70 | 0.000618 J | 0.00126 U | 0.00038 J | 0.00126 U |
| 4/18 | 80 | 0.000585 J | 0.00118 U | 0.000314 J | 0.00118 U |

| MW-106 | Depth (ft) | PCE | TCE | cDCE |
|---|---|---|---|---|
| 8/12 | 40 | **3.1** | **0.17** | 0.05 U |
| 8/12 | 50 | **0.73** | 0.03 U | 0.11 |
| 8/12 | 60-140 | ND | ND | ND |

| MBGW-5 | Depth (ft) | cDCE | TCE | PCE |
|---|---|---|---|---|
| 3/19 | 45 | **0.26** | **0.47** | **3.4** |

| 21417-MB8 | Depth (ft) | PCE |
|---|---|---|
| 5/17 | 27 | 0.0238 |

| HMW-1IB | Depth (ft) | TCE | PCE |
|---|---|---|---|
| 3/19 | 50 | **0.24** | **0.12** |

| MBGW-3 | Depth (ft) | PCE |
|---|---|---|
| 3/19 | 26 | **0.074** |

| MW-114 | Depth (ft) | PCE | TCE | cDCE |
|---|---|---|---|---|
| 10/12 | 35 | **8.8** | **0.45** | 0.11 |
| 10/12 | 40 | **0.59** | **0.071** | 0.05 U |
| 10/12 | 45 | **0.25** | 0.03 U | 0.05 U |

| HMW-2IB | Depth (ft) | PCE |
|---|---|---|
| 3/19 | 45 | **0.12** |

Former American Linen

B-115/MW-115
12/12 ND

ROY ST

VALLEY ST

BB-8
6/97 NA

R-MW-4
10/92 NA

MW-147
4/18 ND

BB-10
8/97 NA

21417-MB1
5/17 NA

MBGW-12
3/19 ND

MBPP-7
3/19 NA

MBPP-5
3/19 NA

21417-MB6
5/17 NA

TB-18
3/98 ND

MBGW-1
3/19 ND

615 Dexter Ave N

21417-MB2
5/17 NA

MBGW-13
3/19 NA

MBGW-6
3/19 ND

MBGW-4
3/19 NA

21417-MB9
5/17 NA

HMW-3IA
3/19 NA

HMW-3D
3/19 NA

HMW-2D
3/19 ND

HMW-2S
3/19 ND

MBGW-2
3/19 ND

HMW-1S
3/19 ND

B-119/MW-119
3/13 ND

B-117/MW-117
(Decommissioned)
2/13 ND

21417-MB5
5/17 NA

MBPP-4
3/19 NA

MBPP-1
3/19 NA

21417-MB10
5/17 NA

DEXTER AVE N

MBGW-7
3/19 ND

BB-5
3/97 NA

21417-MB7
5/17 NA

MBGW-14
3/19 ND

9TH AVE N

MBPP-8
3/19 ND

MBPP-6
3/19 ND

MBPP-3
3/19 NA

21417-MB11
5/17 NA

HMW-4IA
3/19 NA

MBGW-9
3/19 ND

MBGW-8
3/19 ND

MBPP-2
3/19 NA

MBGW-15
3/19 NA

21417-MB3
5/17 NA

21417-MB4
5/17 NA

MBGW-16
3/19 ND

MBGW-10
3/19 ND

MERCER ST

B-118/MW-118
(Decommissioned)
3/13 ND

MBGW-11
3/19 NA

MERCER ST

MERCER ST

8TH AVE N

Source: Aerial photograph provided by Hexagon Imagery Program Data.

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AW (SoilcVOCs_sat_Broad).mxd Date: 10/14/2019 User Name: melissaschweitzer

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| mg/kg | Milligram per Kilogram |
| ND | Not Detected Above Cleanup Level |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Soil samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

**Chemical Concentrations (cVOCs) Detected in Soil Below Water Table Broad Block**

19409-04 10/19

HARTCROWSER

Figure **29**

| 21417-MB6 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 9 | 43.3 | 29.1 | 9.18 | 3.1 |

| 21417-MB8 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 27 | 31.8 | 29.3 | 2.38 | 2.69 |

| MBGW-4 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 2.5 | 50 | 32 | 5.6U |
| 3/19 | 5 | 65 | 22 | 12 |
| 3/19 | 7.5 | 46 | 26 | 5.4U |
| 3/19 | 25 | 54 | 36 | 6U |

| MBGW-3 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 7.5 | 43 | 32 |
| 3/19 | 12.5 | 61 | 40 |
| 3/19 | 25 | 42 | 33 |

| MBPP-5 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 25 | 49 | 34 |

| MBGW-1 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 5 | 49 | 25 | 43 |
| 3/19 | 17.5 | 45 | 43 | 5.7U |

| MBPP-7 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 5 | 200 | 38 | 6.6 |

| MBGW-2 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 12.5 | 47 | 24 | 8.5 |
| 3/19 | 25 | 130 | 34 | 23 |
| 3/19 | 30 | 46 | 42 | 6.1U |

| MBGW-6 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 32 | 21 |

| MBPP-1 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 7.5 | 81 | 46 | 93 |

| MBGW-12 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 5 | 56 | 42 |

| 21417-MB9 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 13 | 45.5 | 31.4 | 19.3 | 4.24 |
| 4/17 | 22 | 105 | 39.1 | **279** | 5.01 |

| MBGW-5 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 27.5 | 39 | 25 |

| HMW-3IA | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 22.5 | 50 | 39 |

| HMW-2IB | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 7.5 | 72 | 33 | 10 |

| MBGW-7 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 33 | 21 |
| 3/19 | 17.5 | 37 | 34 |
| 3/19 | 40 | 42 | 36 |

| MBPP-4 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 10 | 48 | 29 | 5.6 |

| 21417-MB10 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 28 | 42 | 43.2 | 6.75 | 7.75 |

| MBPP-8 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 3/19 | 15 | 80 | 30 | 16 | 16 |

| MBGW-9 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 43 | 42 |

| MBGW-8 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 25 | 40 | 36 |

| MBGW-15 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 20 | 170 | 18 |

| MBPP-3 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 25 | 35 | 26 |

| 21417-MB11 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 23 | 101 | 39.5 | 7.73 | 4.18 |

| MBPP-2 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 10 | 100 | 45 | 21 |

| 21417-MB4 | Depth (ft) | Barium | Chromium | Lead | Arsenic |
|---|---|---|---|---|---|
| 4/17 | 24 | 68.9 | 35.8 | 40.2 | 6.94 |

| MBGW-10 | Depth (ft) | Barium | Chromium |
|---|---|---|---|
| 3/19 | 10 | 48 | 44 |

| MBGW-11 | Depth (ft) | Barium | Chromium | Lead |
|---|---|---|---|---|
| 3/19 | 5 | 68 | 38 | 10 |

Former American Linen

615 Dexter Ave N

DEXTER AVE N

ROY ST

VALLEY ST

9TH AVE N

8TH AVE N

MERCER ST

MERCER ST

MBGW-13 3/19 ND

HMW-3D 3/19 ND

HMW-2D 3/19 ND

HMW-2S 3/19 ND

HMW-2IA 3/19 ND

HMW-1S 3/19 ND

HMW-1IB 3/19 ND

HMW-1D 3/19 ND

MBPP-6 3/19 ND

MBGW-14 3/19 ND

HMW-4IA 3/19 ND

MBGW-16 3/19 ND

Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

mg/kg Milligram per Kilogram
ND Not Detected
U Not detected at or above the specified concentration
J Analyte was positively identified and the reported result is an estimate

| Metals (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Arsenic | 20 |
| Barium | 1600 |
| Chromium | 2000 |
| Lead | 250 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

**Chemical Concentrations (Metals) Detected in Soil Broad Block**

19409-04 10/19

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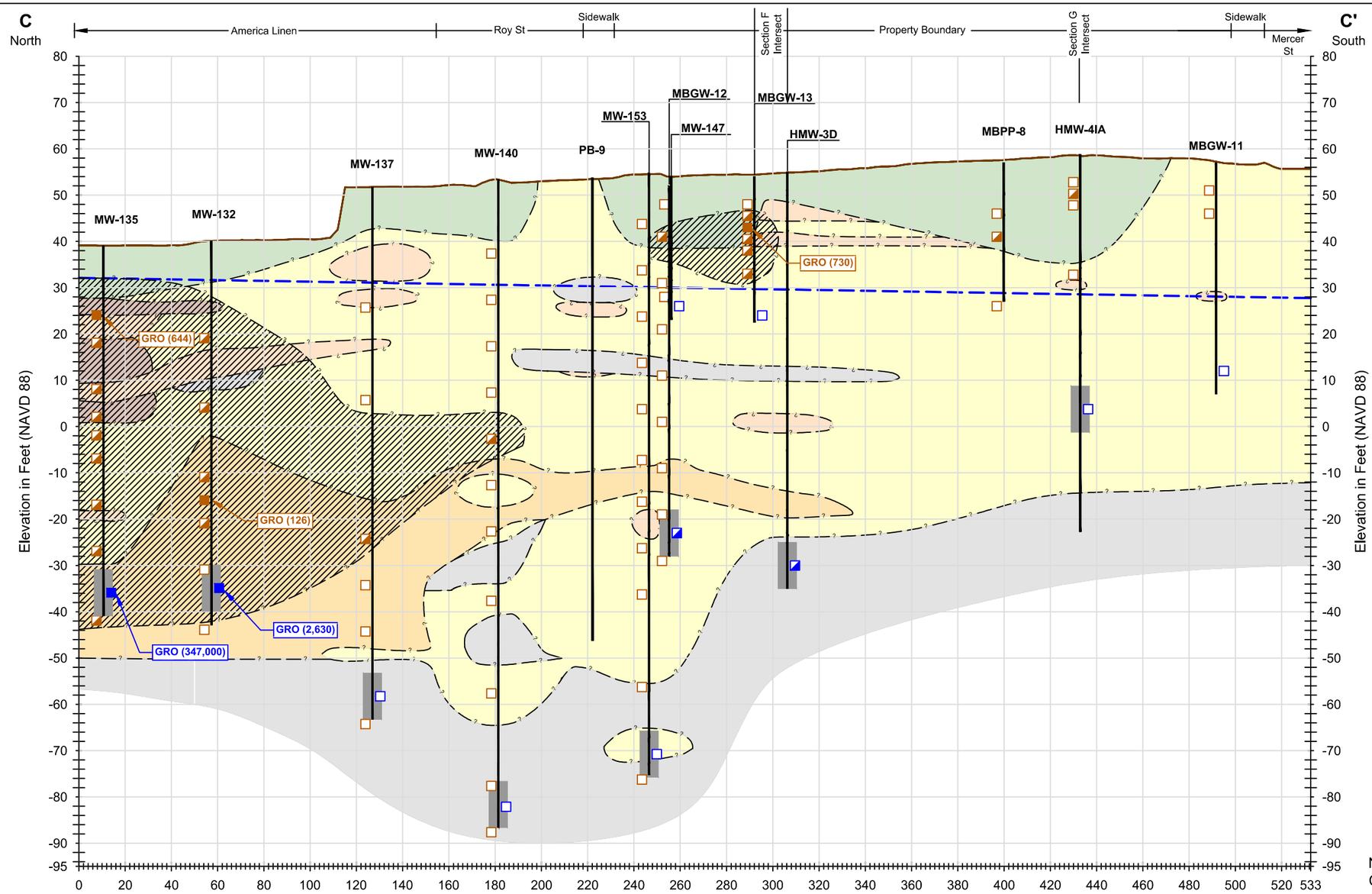
Figure 30

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AM (SoilMetals_Broad).mxd Date: 10/14/2019 User Name: melissaschweitzer




Note: Scale is different on cross-section C-C' to show deep stratigraphy.

## Legend

Boring Name — HMW-2D

Boring Location

Screen Interval

Approximate Groundwater Elevation

| | |
|---|---|
| Soil (mg/kg) Non-Detection Sample | Groundwater (µg/L) Non-Detection Sample |
| Soil (mg/kg) Sample Below MTCA Cleanup Levels | Groundwater (µg/L) Sample Below MTCA Cleanup Levels |
| Soil (mg/kg) Sample Above MTCA Cleanup Levels | Groundwater (µg/L) Sample Above MTCA Cleanup Levels |

**Soil Units (Predominant Component)**

Fill; Sand; Gravel; Silty Sand; Silt and/or Clay; Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

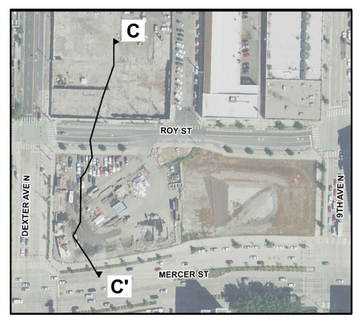
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




INSET MAP

Horizontal Scale in Feet
0 50 100
0 25 50
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

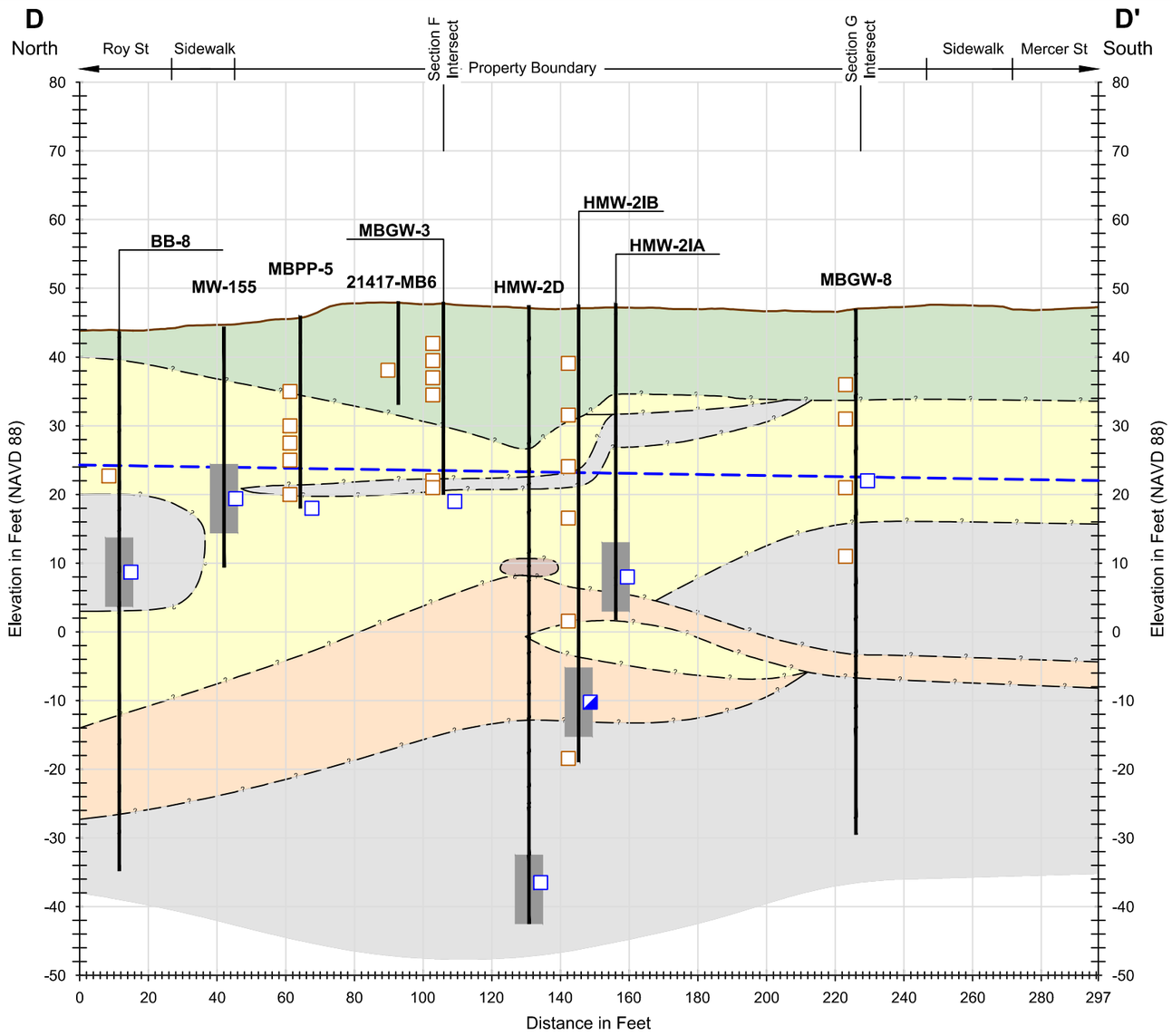
**Generalized Subsurface Cross Section C-C'**
**TPH**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure
**31**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_C-TPHSamples Date: 10-09-2019 Author: melissaschweitzer




## Legend

Boring Name — **HMW-2D**

Boring Location

Screen Interval

Approximate Groundwater Elevation

Soil (mg/kg) Non-Detection Sample

Soil (mg/kg) Sample Below MTCA Cleanup Levels

Soil (mg/kg) Sample Above MTCA Cleanup Levels

Groundwater (µg/L) Non-Detection Sample

Groundwater (µg/L) Sample Below MTCA Cleanup Levels

Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

Fill

Sand

Gravel

Silty Sand

Silt and/or Clay

Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

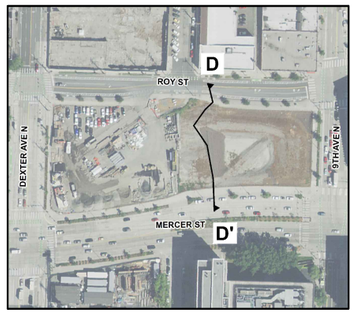
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

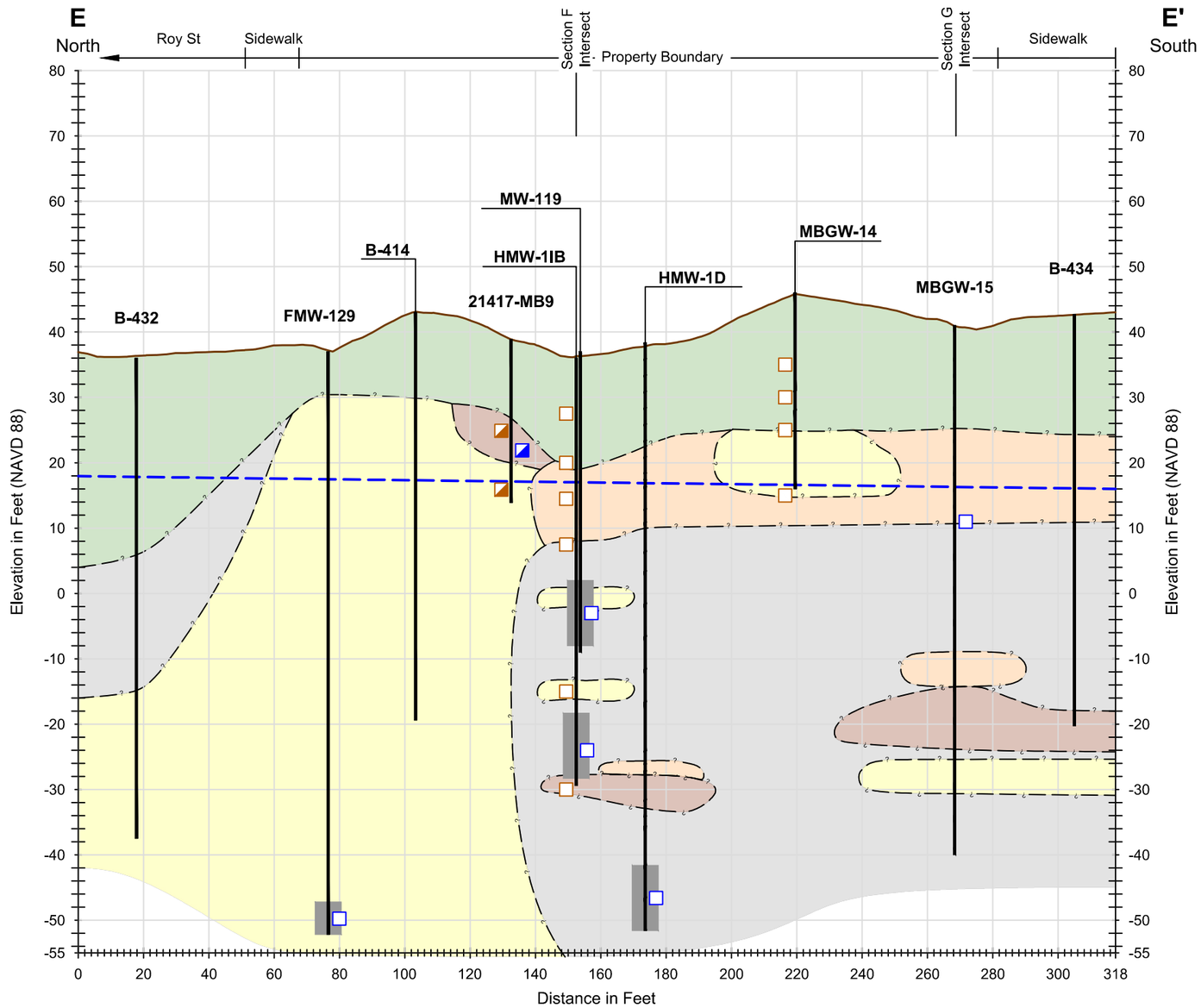
**Generalized Subsurface Cross Section D-D'**
**TPH**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure
**32**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_D-TPHSamples Date: 10-09-2019 Author: melissaschweitzer




## Legend

Boring Name — **HMW-2D**

Boring Location —

Screen Interval —

— Approximate Groundwater Elevation

Soil (mg/kg)
Non-Detection Sample

Soil (mg/kg)
Sample Below MTCA Cleanup Levels

Soil (mg/kg)
Sample Above MTCA Cleanup Levels

Groundwater (µg/L)
Non-Detection Sample

Groundwater (µg/L)
Sample Below MTCA Cleanup Levels

Groundwater (µg/L)
Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

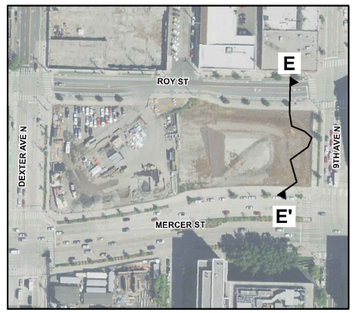
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

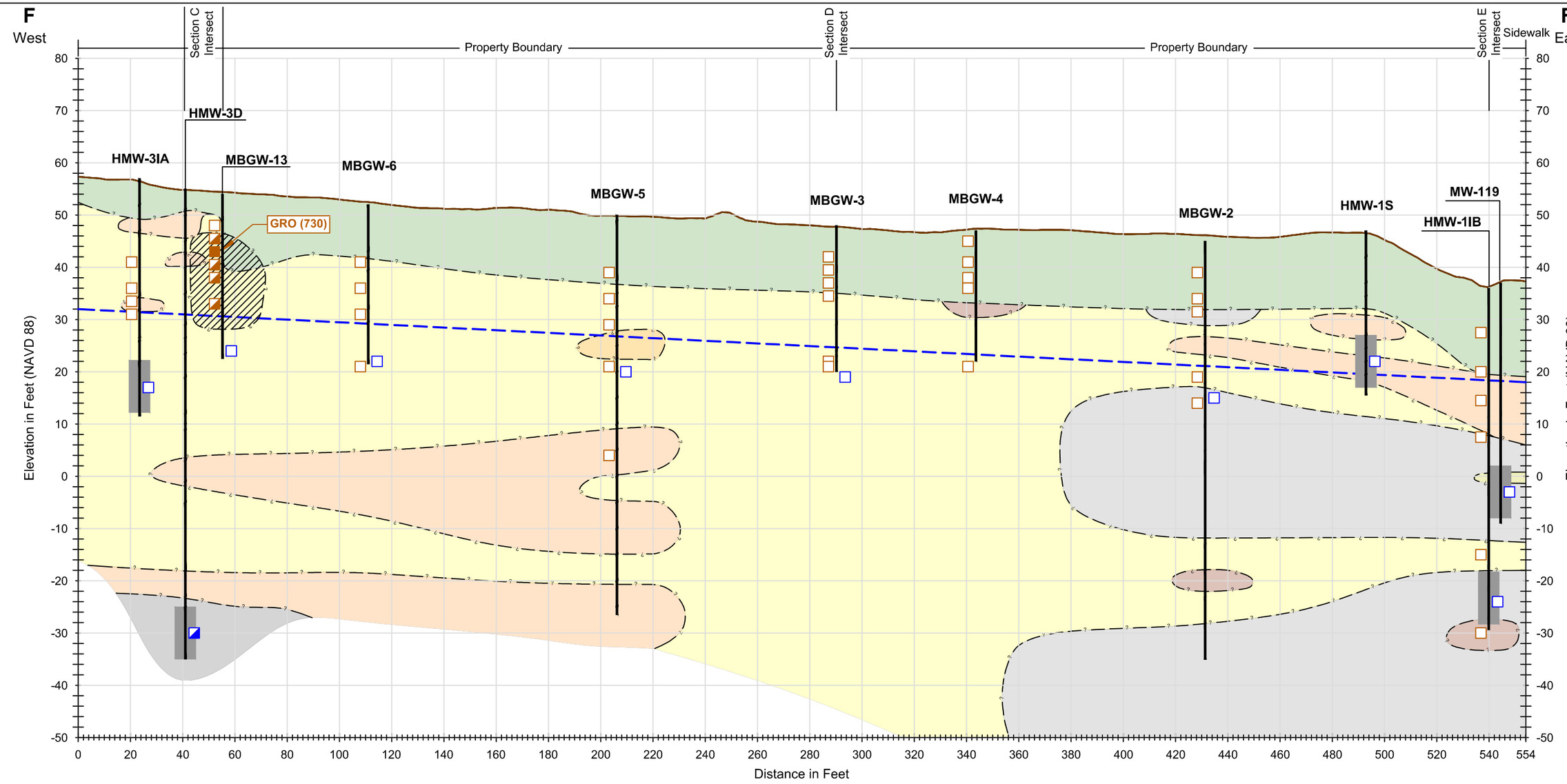
**Generalized Subsurface Cross Section E-E'**
**TPH**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure
**33**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_E-TPHSamples Date: 10-09-2019 Author: melissaschweitzer




## Legend

Boring Name — HMW-2D

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Silty Sand
- Sand
- Silt and/or Clay
- Gravel
- Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |


INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section F-F'**
**TPH**
**Broad Block**

19409-04 10/19

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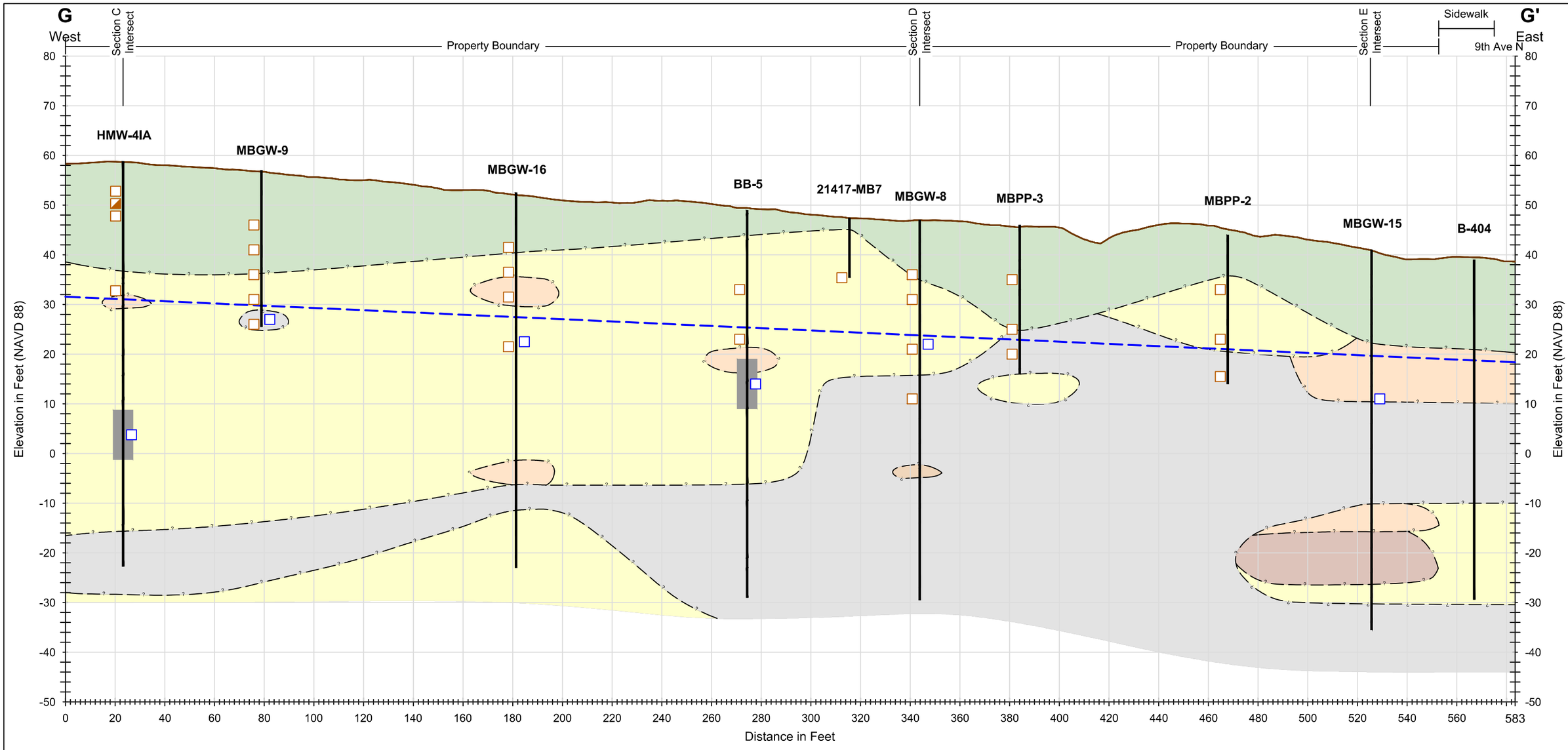
Figure
**34**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_F-TPHSamples Date: 10-09-2019 Author: melissaschweitzer




## Legend

Boring Name — HMW-2D

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

mg/kg - milligram per kilogram

µg/L - microgram per liter

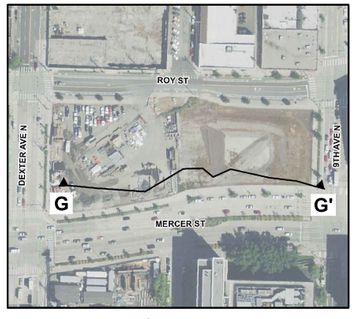
Soil and groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).

Carcinogenic polycyclic aromatic hydrocarbons (cPAH)

Total toxicity equivalence (TEQ)

| TPH (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Diesel-range organics (DRO) | 2000 |
| Heavy oil-range organics (HRO) | 2000 |
| Gasoline-range organics (GRO) | 100 |
| Toluene (T) | 7 |
| Ethylbenzene (E) | 6 |
| Xylenes (X) | 9 |
| Total cPAHs TEQ (cPAHs) | 0.1 |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |




INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section G-G'**
**TPH**
**Broad Block**

19409-04 10/19

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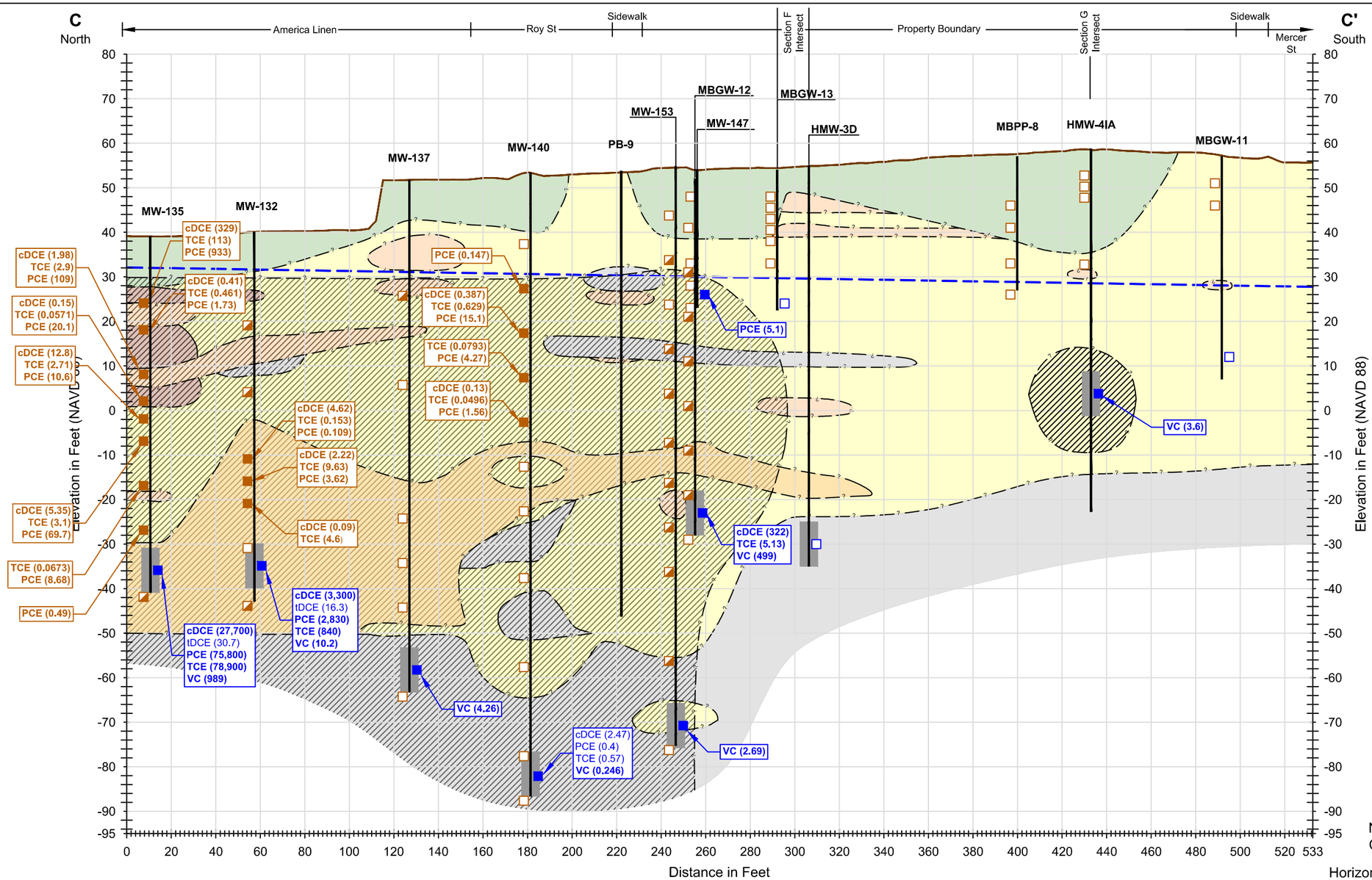
Figure 35

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_G-TPHSamples Date: 10-09-2019 Author: melissaschweitzer




Note: Scale is different on cross-section C-C' to show deep stratigraphy.

## Legend

Boring Name — HMW-2D

Boring Location — Approximate Groundwater Elevation

Screen Interval

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

mg/kg - milligram per kilogram

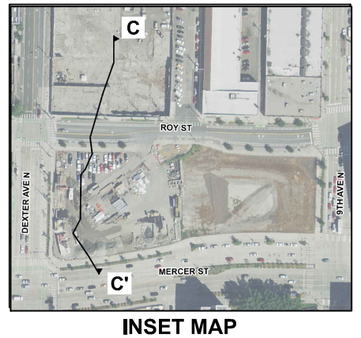
µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

**Bold** - Samples exceed MTCA cleanup levels

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




INSET MAP

Horizontal Scale in Feet
0 50 100
0 25 50
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

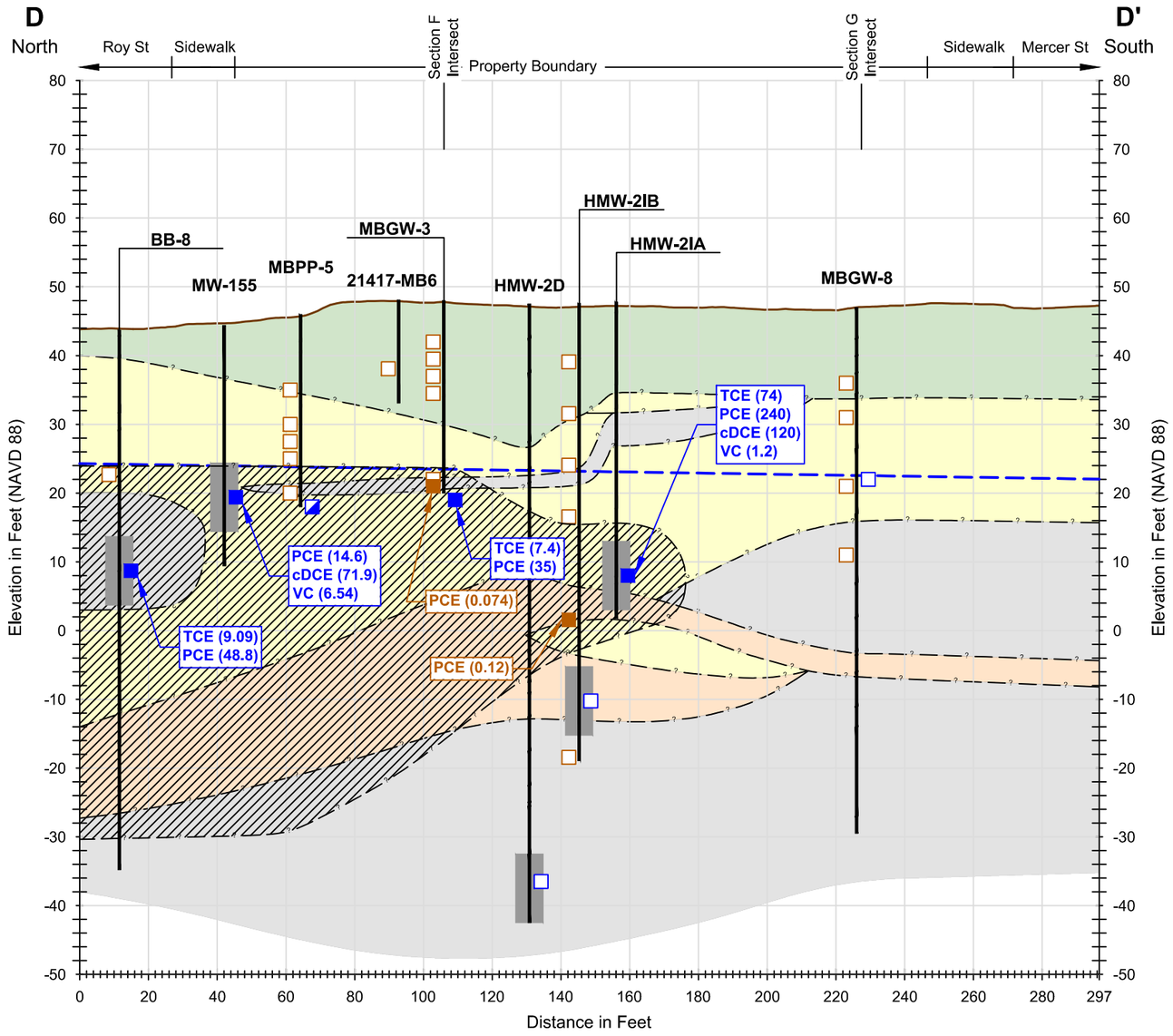
**Generalized Subsurface Cross Section C-C'**
**cVOCs**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure 36

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_C-cVOCsSamples Date: 10-10-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

Boring Location

Screen Interval

Approximate Groundwater Elevation

Soil (mg/kg) Non-Detection Sample

Soil (mg/kg) Sample Below MTCA Cleanup Levels

Soil (mg/kg) Sample Above MTCA Cleanup Levels

Groundwater (µg/L) Non-Detection Sample

Groundwater (µg/L) Sample Below MTCA Cleanup Levels

Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

Fill | Sand | Gravel

Silty Sand | Silt and/or Clay | Inferred Impacted Zone

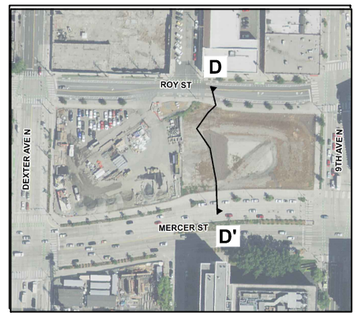
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

**Generalized Subsurface Cross Section D-D'**
**cVOCs**
**Broad Block**

19409-04 10/19

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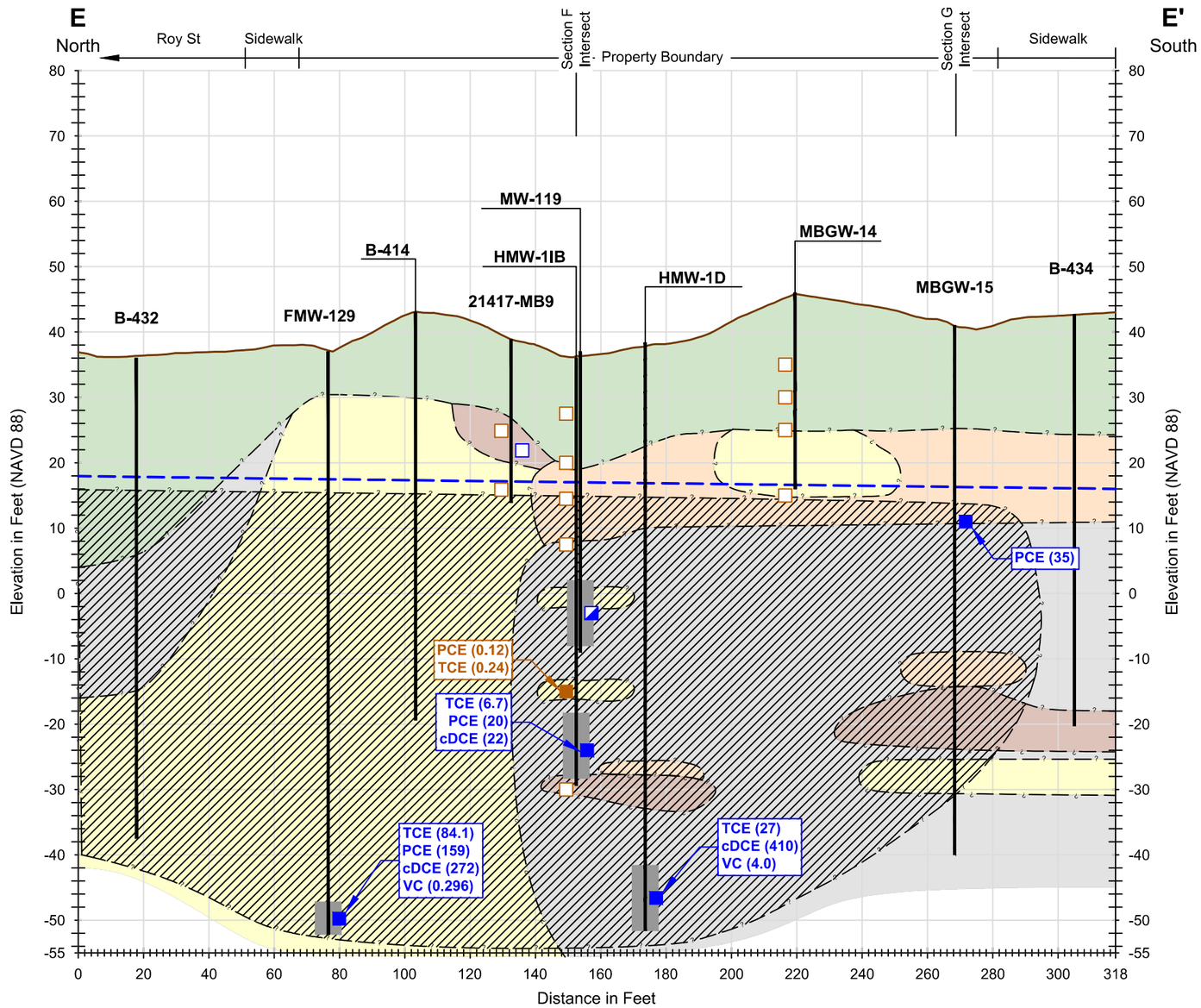
Figure **37**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_D-cVOCsSamples Date: 10-15-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

Boring Location

Screen Interval

Approximate Groundwater Elevation

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

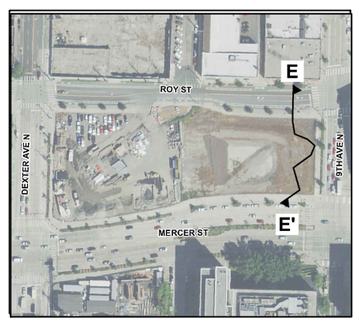
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

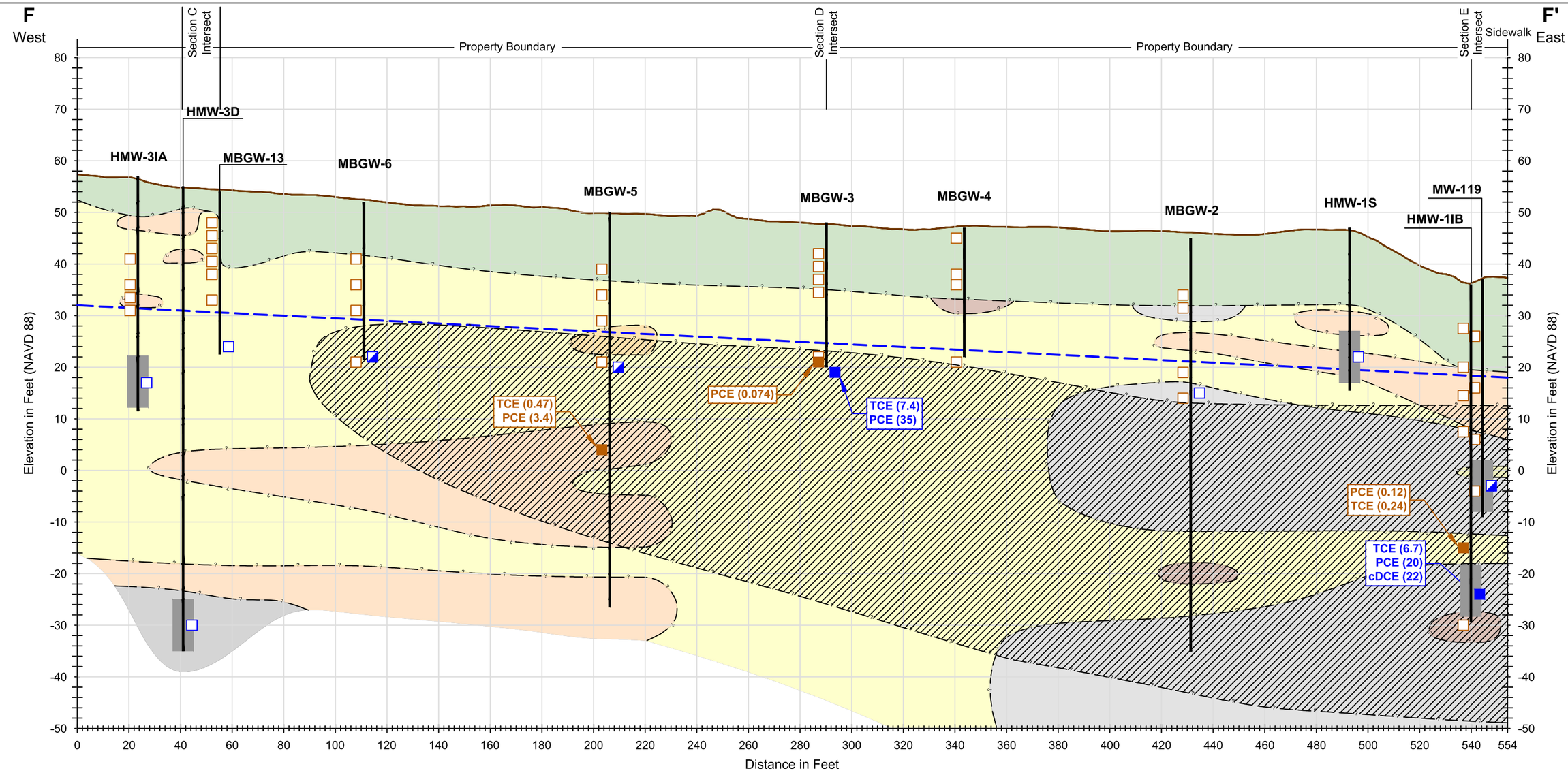
**Generalized Subsurface Cross Section E-E'**
**cVOCs**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure **38**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_E-cVOCsSamples Date: 10-15-2019 Author: melissaschweitzer




**Legend**

Boring Name — **HMW-2D**

Boring Location —

Screen Interval —

Approximate Groundwater Elevation

Soil (mg/kg) Non-Detection Sample

Soil (mg/kg) Sample Below MTCA Cleanup Levels

Soil (mg/kg) Sample Above MTCA Cleanup Levels

Groundwater (µg/L) Non-Detection Sample

Groundwater (µg/L) Sample Below MTCA Cleanup Levels

Groundwater (µg/L) Sample Above MTCA Cleanup Levels

**Soil Units (Predominant Component)**

Fill | Sand | Gravel

Silty Sand | Silt and/or Clay | Inferred Impacted Zone

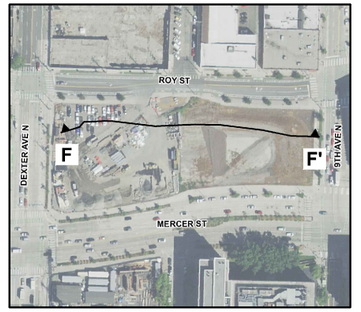
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




**INSET MAP**

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

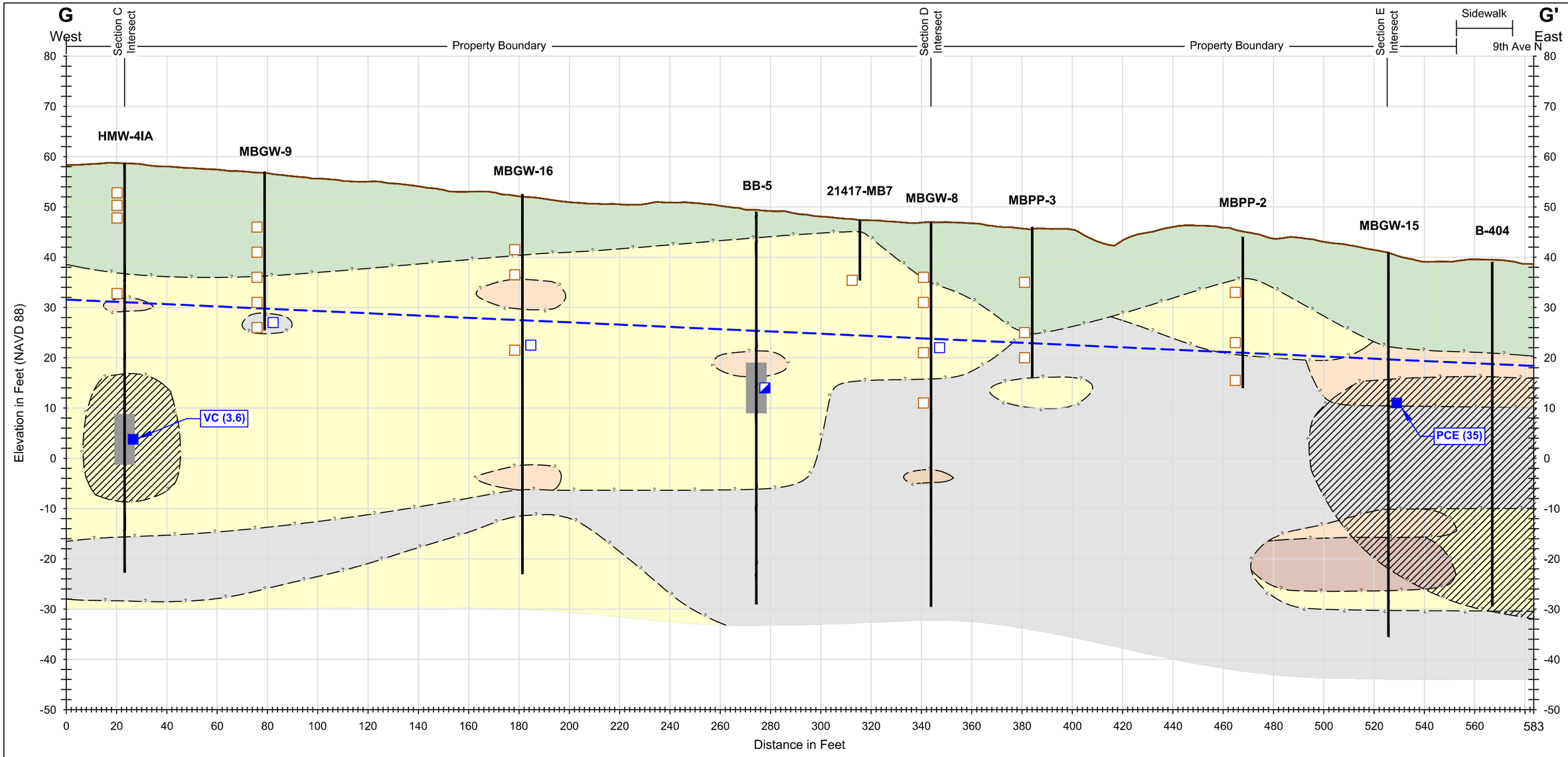
**Generalized Subsurface Cross Section F-F'**
**cVOCs**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure **39**

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_F-cVOCsSamples Date: 10-15-2019 Author: melissaschweitzer




## Legend

Boring Name — HMW-2D

Boring Location — Approximate Groundwater Elevation

Screen Interval

- Soil (mg/kg) Non-Detection Sample
- Soil (mg/kg) Sample Below MTCA Cleanup Levels
- Soil (mg/kg) Sample Above MTCA Cleanup Levels
- Groundwater (µg/L) Non-Detection Sample
- Groundwater (µg/L) Sample Below MTCA Cleanup Levels
- Groundwater (µg/L) Sample Above MTCA Cleanup Levels

### Soil Units (Predominant Component)

- Fill
- Sand
- Gravel
- Silty Sand
- Silt and/or Clay
- Inferred Impacted Zone

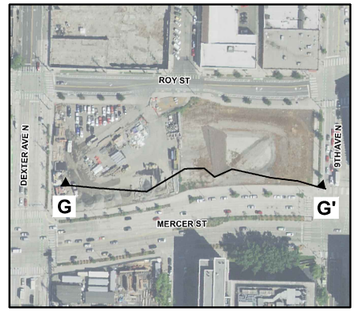
mg/kg - milligram per kilogram

µg/L - microgram per liter

Soil and groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).

| cVOCs (mg/kg) in Soil | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| cis-1,2-dichloroethene (cDCE) | 160 |
| Trichloroethene (TCE) | 0.03 |
| Tetrachloroethene (PCE) | 0.05 |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |




INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Mercer Megablock
Seattle, Washington

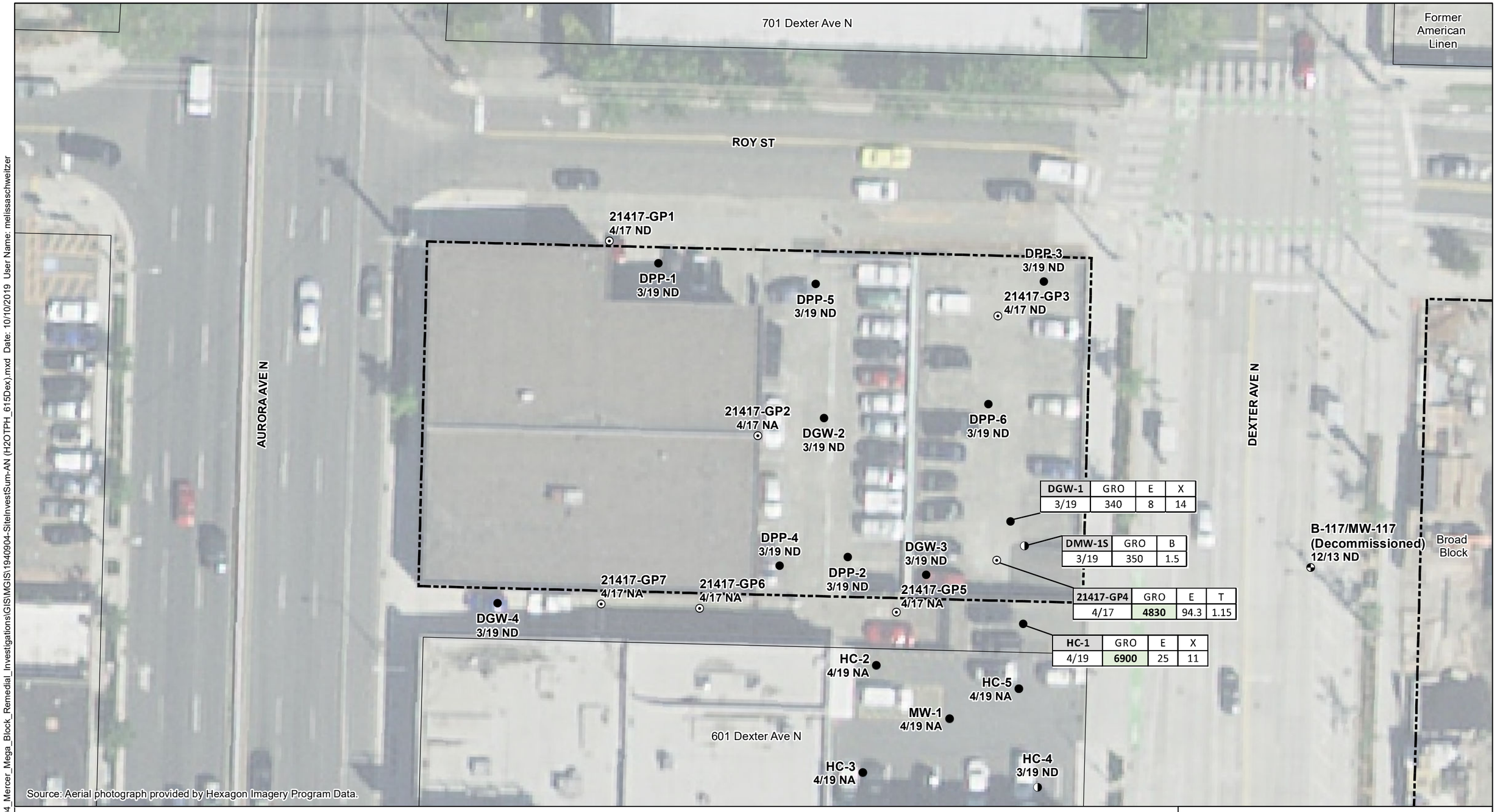
**Generalized Subsurface Cross Section G-G'**
**cVOCs**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure 40

File: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\CAD\1940904-001 (XSec).dwg Layout:SEC_G-cVOCsSamples Date: 10-15-2019 Author: melissaschweitzer




Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AN (H2OTPH_615Dex).mxd Date: 10/10/2019 User Name: melissaschweitzer

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 15 30 60 Feet

N

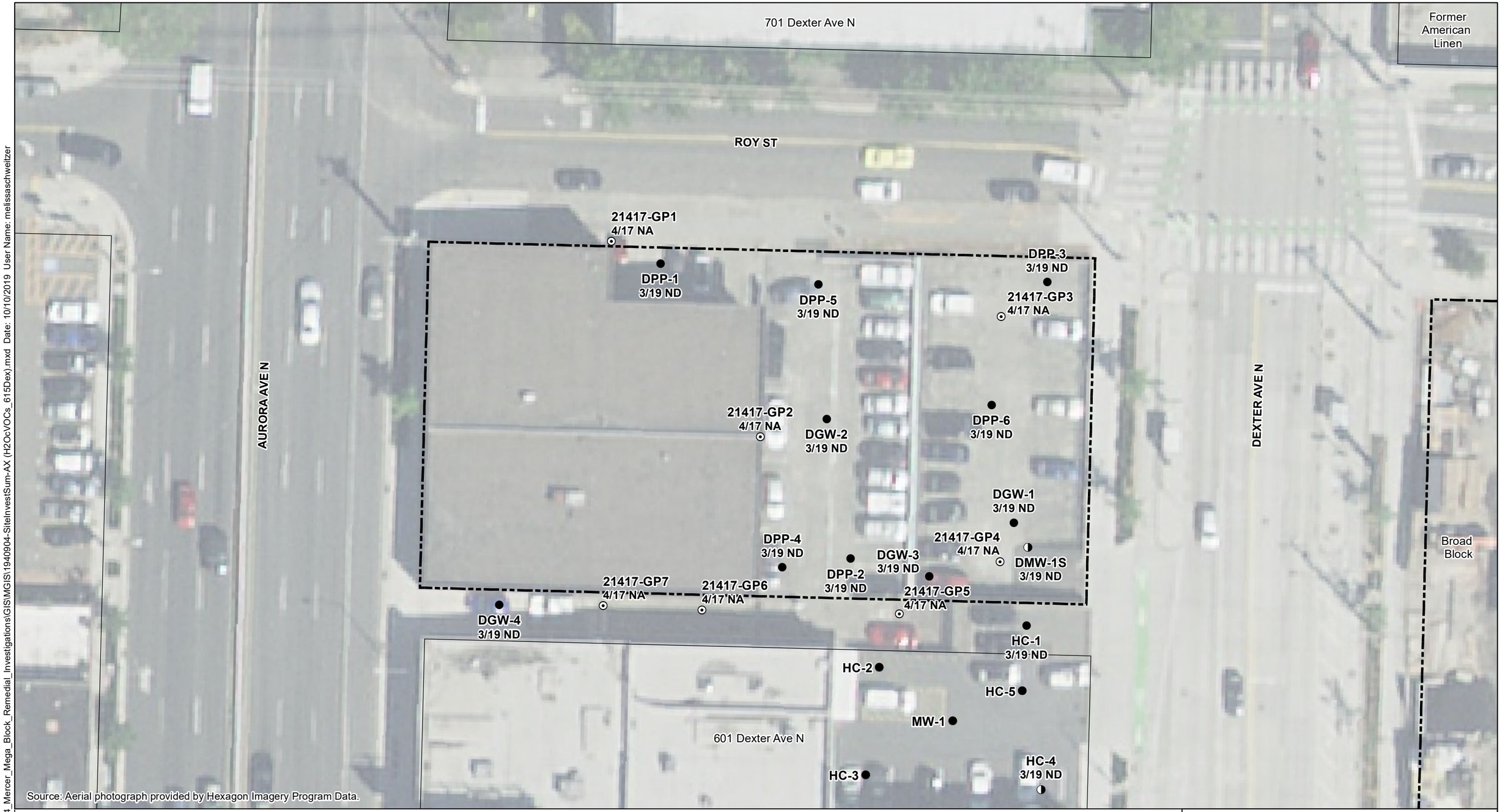
Mercer Megablock
Seattle, Washington

**Chemical Concentrations (TPH) Detected in Groundwater 615 Dexter**

19409-04 10/19

HARTCROWSER

Figure 41




Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AX (H2OcVOCs_615Dex).mxd Date: 10/10/2019 User Name: melissaschweitzer

**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 15 30 60 Feet

N

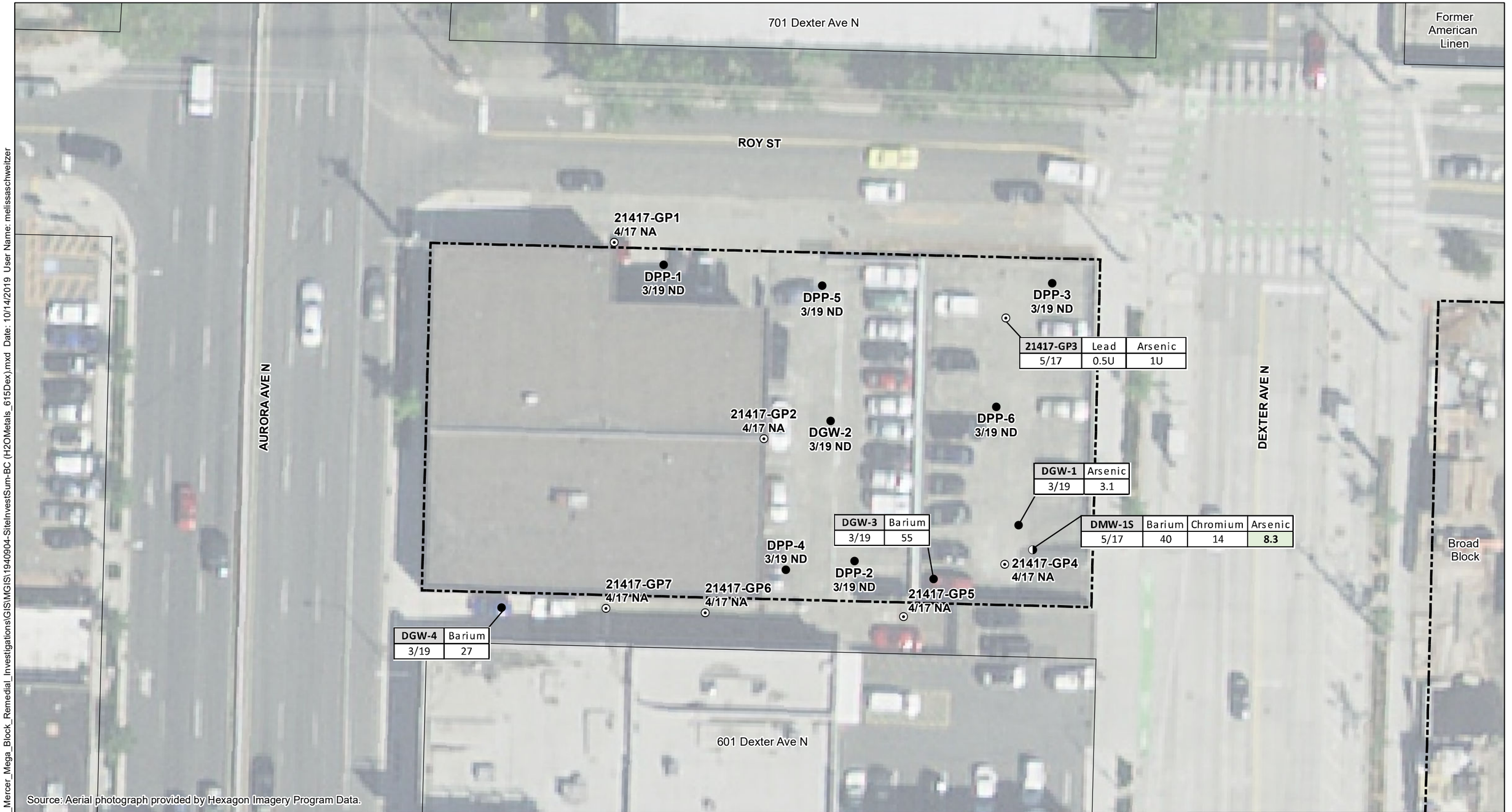
Mercer Megablock
Seattle, Washington

**Chemical Concentrations (cVOCs) Detected in Groundwater 615 Dexter**

19409-04 10/19

HARTCROWSER

Figure **42**




**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| Metals (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Arsenic | 5 |
| Barium | 2000 |
| Lead | 15 |
| Chromium (Total) | 50 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Feature locations are approximate.
3. Results shown for dissolved metals, except for DMW-1S, which was analyzed for total metals.

0 15 30 60 Feet

N

Mercer Megablock
Seattle, Washington

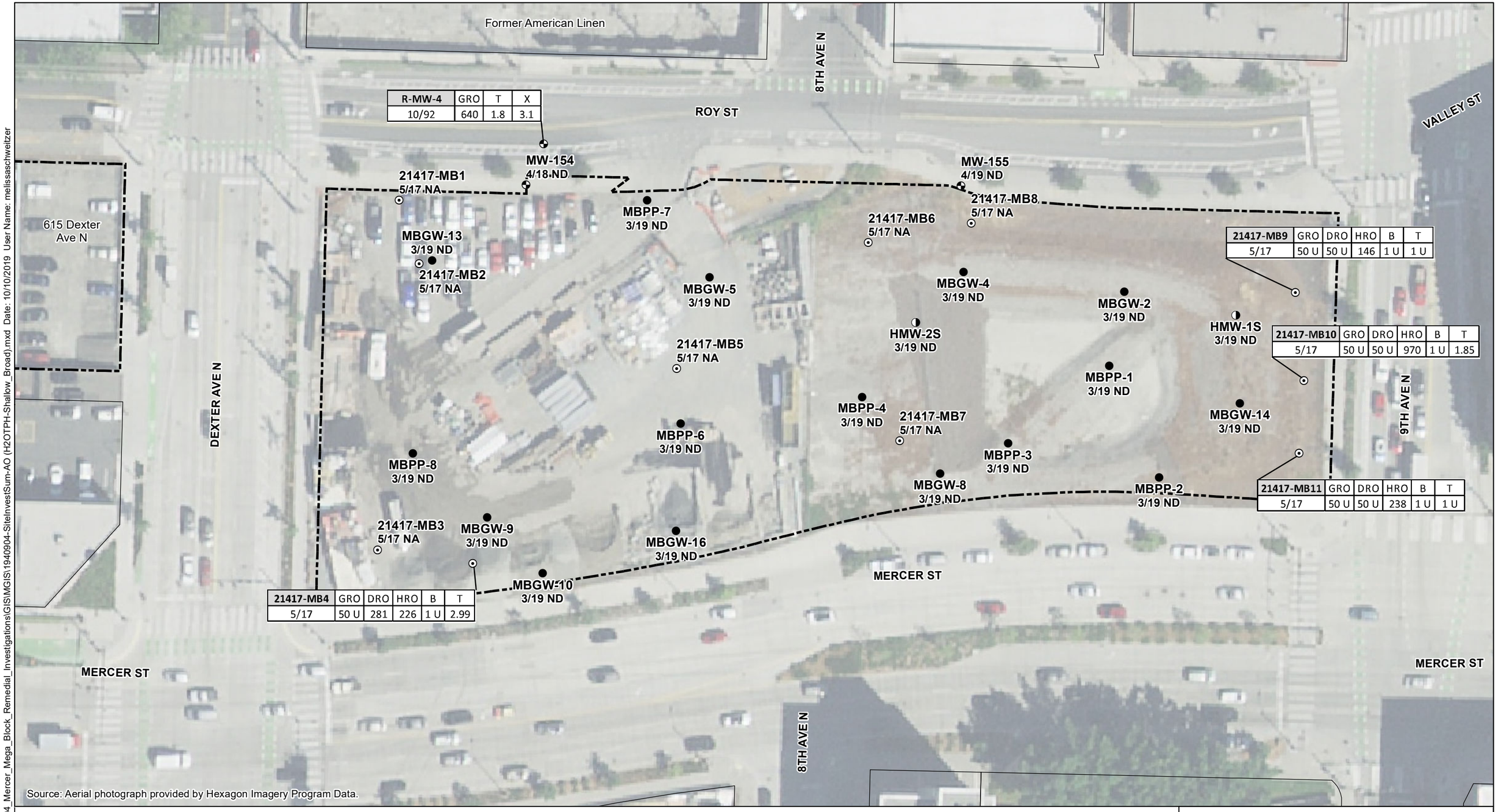
**Chemical Concentrations (Metals) Detected in Groundwater 615 Dexter**

19409-04 10/19

HARTCROWSER

Figure 43

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-BC (H2OMetals_615Dex).mxd Date: 10/14/2019 User Name: melissaschweitzer




**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Historical Boring with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

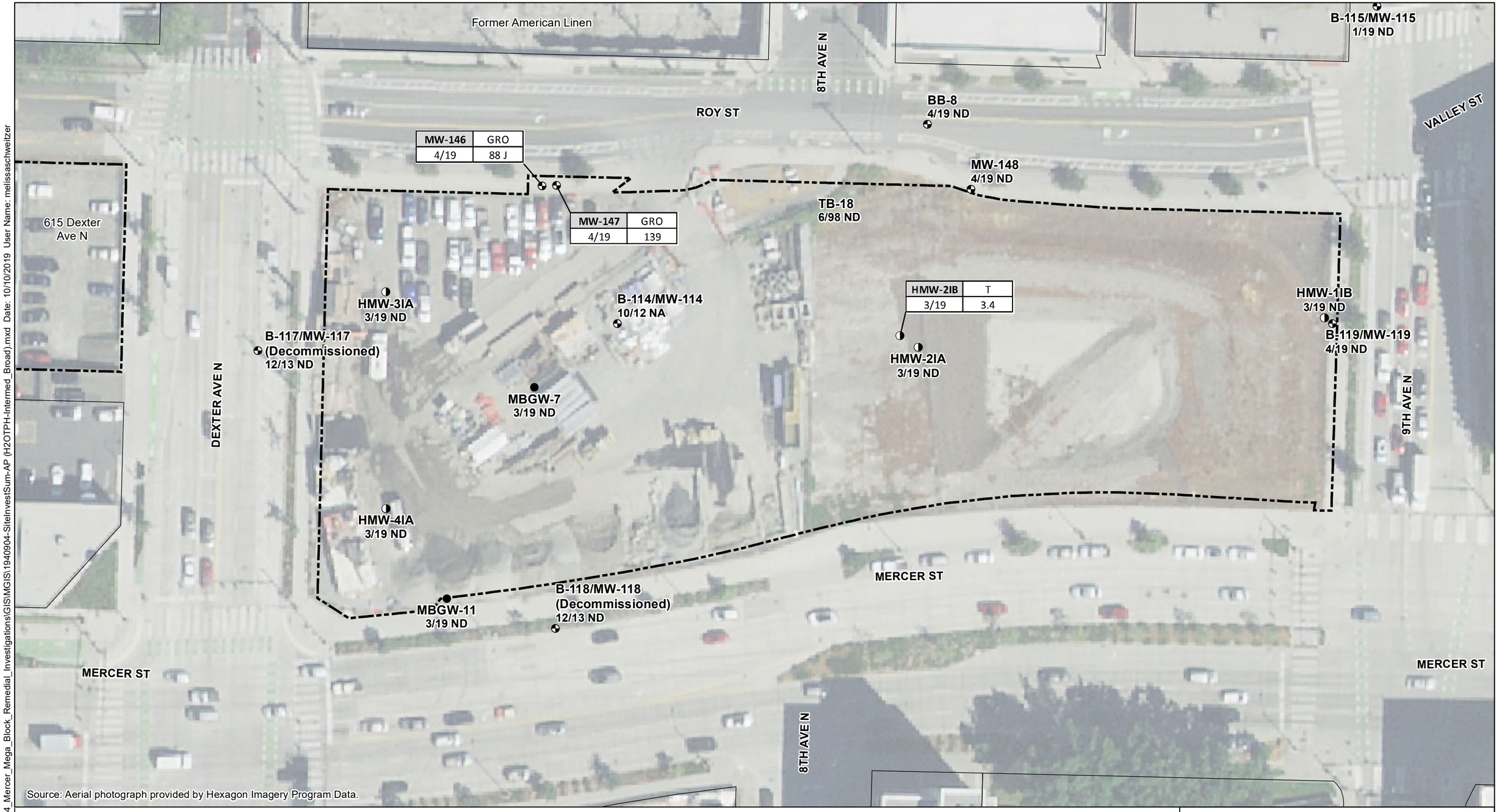
**Chemical Concentrations (TPH) Detected in Groundwater - Shallow Broad Block**

19409-04 10/19

HARTCROWSER

Figure **44**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AO (H2OTPH-Shallow_Broad).mxd Date: 10/10/2019 User Name: melissaschweitzer




**Legend**

- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

- ug/L Microgram per Liter
- ND Not Detected
- NA Not Analyzed
- U Not detected at or above the specified concentration
- J Analyte was positively identified and the reported result is an estimate

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

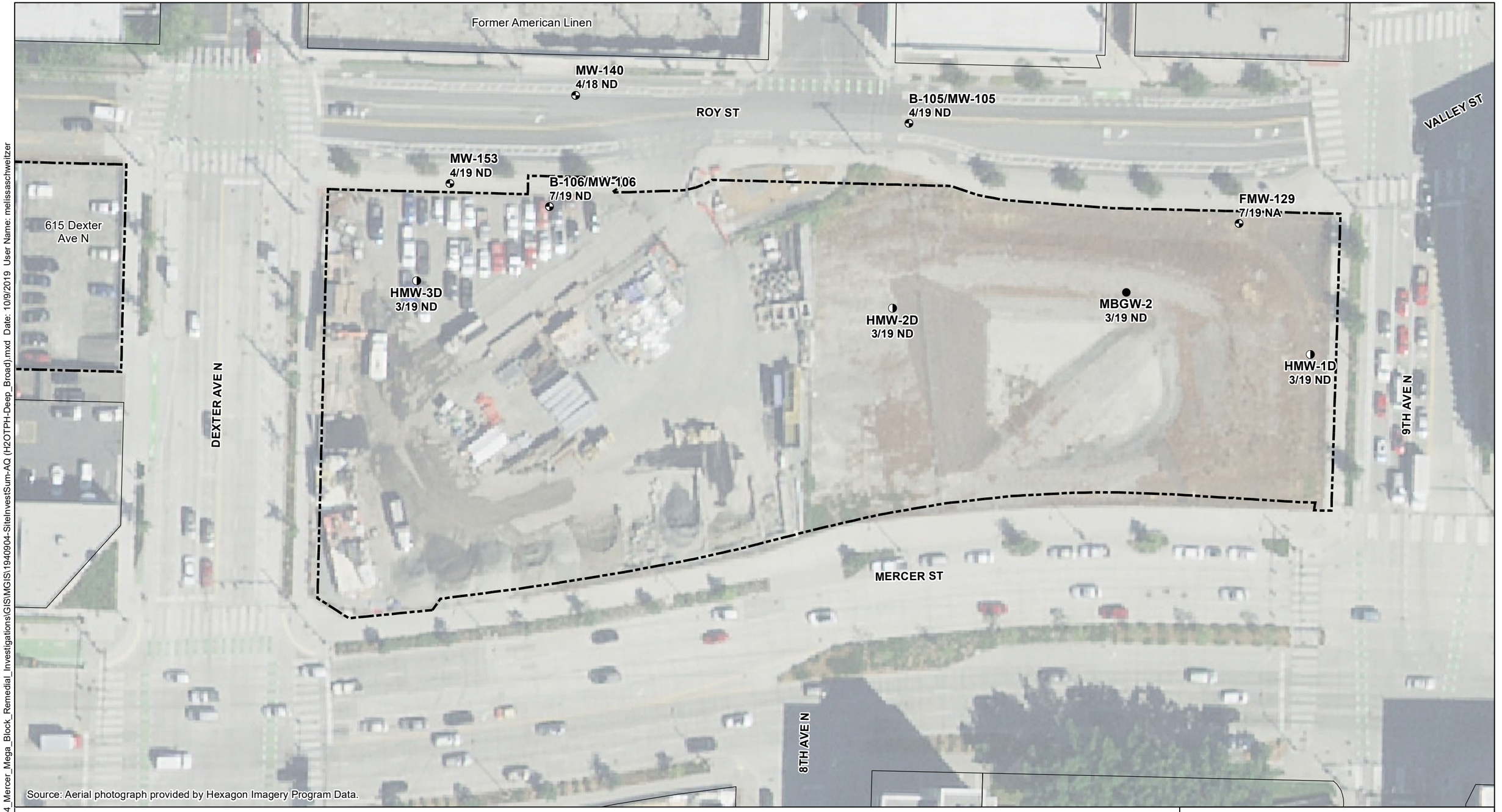
**Chemical Concentrations (TPH) Detected in Groundwater - Intermediate Broad Block**

19409-04 10/19

HARTCROWSER

Figure **45**

Document Path: L:\Notebooks\19409\04_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\19409\04-SiteInvestSum-AP (H2OTPH-Intermed_Broad).mxd Date: 10/10/2019 User Name: melissaschweitzer




**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| TPH (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Gasoline-range organics (GRO) | 800 |
| Benzene (B) | 5 |
| Toluene (T) | 1000 |
| Ethylbenzene (E) | 700 |
| Xylenes (X) | 1000 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for petroleum-related hydrocarbons (TPH).
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

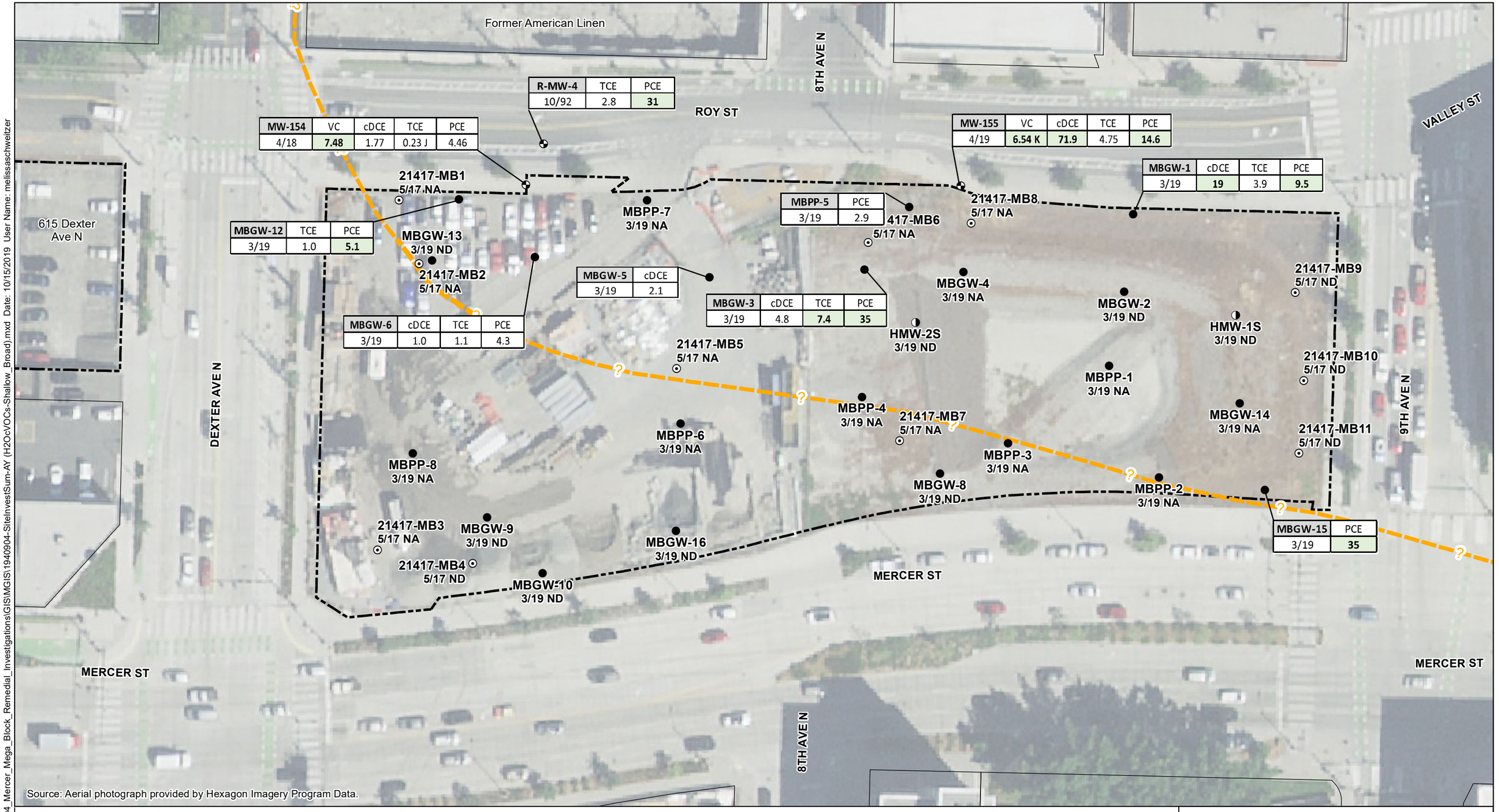
**Chemical Concentrations (TPH) Detected in Groundwater - Deep Broad Block**

19409-04 10/19

HARTCROWSER

Figure 46

Document Path: L:\Notebooks\19409\04_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\19409\04-SiteInvestSum-AQ (H2OTPH-Deep_Broad).mxd Date: 10/9/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Boring with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- cVOC Groundwater Plume from Off Site Source
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

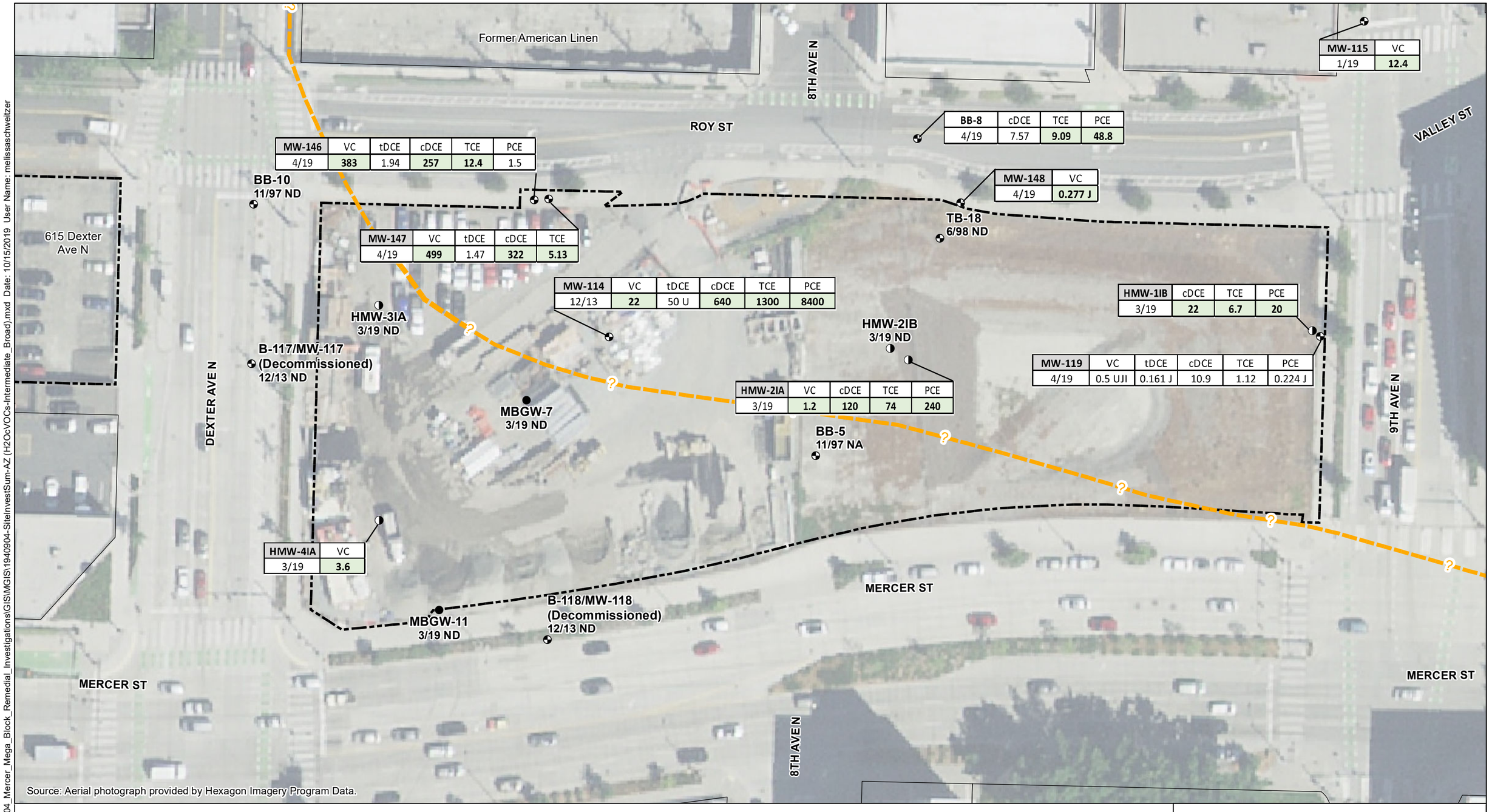
**Chemical Concentrations (cVOCs) Detected in Groundwater - Shallow Broad Block**

19409-04 10/19

HARTCROWSER

Figure 47

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AY (H2OcVOCs-Shallow_Broad).mxd Date: 10/15/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

**Legend**

- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- cVOC Groundwater Plume from Off Site Source
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

**Chemical Concentrations (cVOCs) Detected in Groundwater - Intermediate Broad Block**

19409-04 10/19

HARTCROWSER

Figure **48**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AZ (H2OcVOCs-Intermediate_Broad).mxd Date: 10/15/2019 User Name: melissaschweitzer

Former American Linen

| MW-140 | VC | cDCE | TCE | PCE |
|---|---|---|---|---|
| 4/19 | **0.246 J+** | 2.47 J+ | 0.572 J+ | 0.402 J+ |

| MW-105 | VC | cDCE |
|---|---|---|
| 4/19 | **0.238 J** | 0.917 |

| MW-153 | VC | cDCE |
|---|---|---|
| 4/19 | **2.69** | 1.07 |

ROY ST

VALLEY ST

B-106/MW-106
7/19 ND

615 Dexter Ave N

| FM-129 | VC | tDCE | cDCE | TCE | PCE |
|---|---|---|---|---|---|
| 7/19 | **0.296 J** | 1.61 | **272** | **84.1** | **159** |

HMW-3D
3/19 ND

HMW-2D
3/19 ND

| HMW-1D | VC | tDCE | cDCE | TCE | PCE |
|---|---|---|---|---|---|
| 3/19 | **4.0** | 1.2 | **410** | **27** | 3.4 |

DEXTER AVE N

9TH AVE N

MERCER ST

8TH AVE N

Source: Aerial photograph provided by Hexagon Imagery Program Data.

## Legend

- Monitoring Well with Chemical Analysis
- Historical Monitoring Well with Chemical Analysis
- cVOC Groundwater Plume from Off Site Source
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| cVOCs (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Vinyl Chloride (VC) | 0.2 |
| trans-1,2-Dichloroethylene (tDCE) | 100 |
| cis-1,2-dichloroethene (cDCE) | 16 |
| Trichloroethene (TCE) | 5 |
| Tetrachloroethene (PCE) | 5 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Groundwater samples were analyzed for chlorinated volatile organic compounds (cVOCs).
3. Feature locations are approximate.

0 25 50 100 Feet

Note: Feature locations are approximate.

N

Mercer Megablock
Seattle, Washington

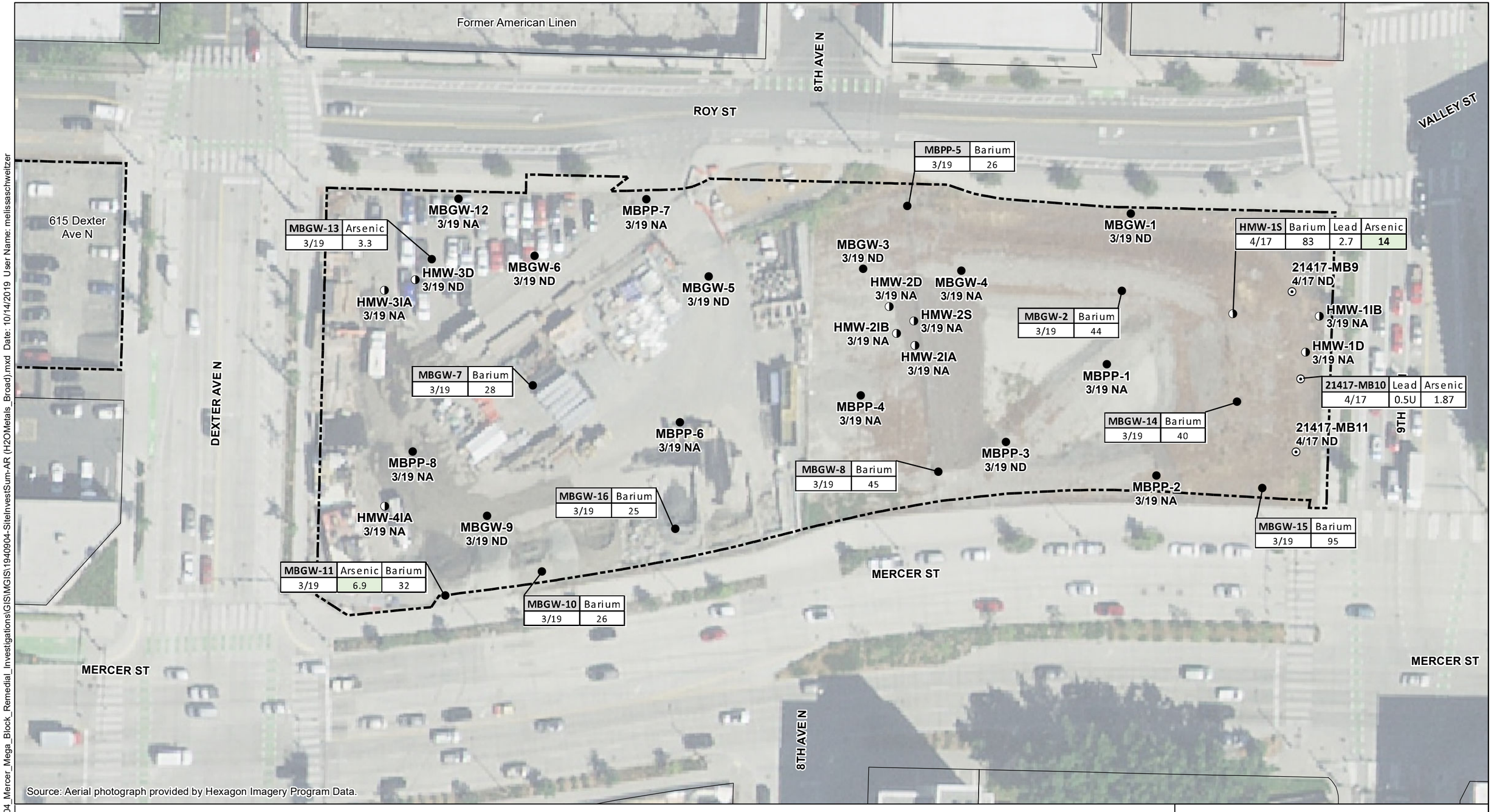
**Chemical Concentrations (cVOCs) Detected in Groundwater - Deep Broad Block**

19409-04 10/19

HARTCROWSER

Figure **49**

Document Path: L:\Notebooks\19409\04_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\19409\04-SiteInvestSum-BA (H2OcVOCs-Deep_Broad).mxd Date: 10/15/2019 User Name: melissaschweitzer




**Legend**

- Boring with Chemical Analysis
- Monitoring Well with Chemical Analysis
- Other Parcel Boundary
- MMB Parcel Boundary

| | |
|---|---|
| ug/L | Microgram per Liter |
| ND | Not Detected |
| NA | Not Analyzed |
| U | Not detected at or above the specified concentration |
| J | Analyte was positively identified and the reported result is an estimate |

| Metals (µg/L) in Groundwater | |
|---|---|
| Detected Analyte | MTCA Cleanup Level |
| Arsenic | 5 |
| Barium | 2000 |
| Lead | 15 |
| Chromium (Total) | 50 |

Notes:
1. Bold and highlighted values indicate above cleanup levels.
2. Feature locations are approximate.
3. Results shown for dissolved metals, except for HMW-1S, which was analyzed for total metals.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

**Chemical Concentrations (Metals) Detected in Groundwater Broad Block**

19409-04 10/19

HARTCROWSER

Figure **50**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-AR (H2OMetals_Broad).mxd Date: 10/14/2019 User Name: melissaschweitzer


**Legend**

**Hart Crowser Explorations**

- Boring
- Monitoring Well

**Historical Explorations**

- Boring
- Monitoring Well

**Soil and Groundwater Detections**

- Soil Sample with Exceedance
- Soil and Groundwater Sample with Exceedance
- Petroleum Impacted Soil and Groundwater Area
- Other Parcel Boundary
- MMB Parcel Boundary

S = Shallow
IA = Intermediate Shallow
IB = Intermidiate Deep
D = Deep

Notes:
1. Samples were taken for all explorations shown.
2. Explorations in blue denote groundwater sample data.
3. Feature locations are approximate.

N

0 15 30 60
Feet

Mercer Megablock
Seattle, Washington

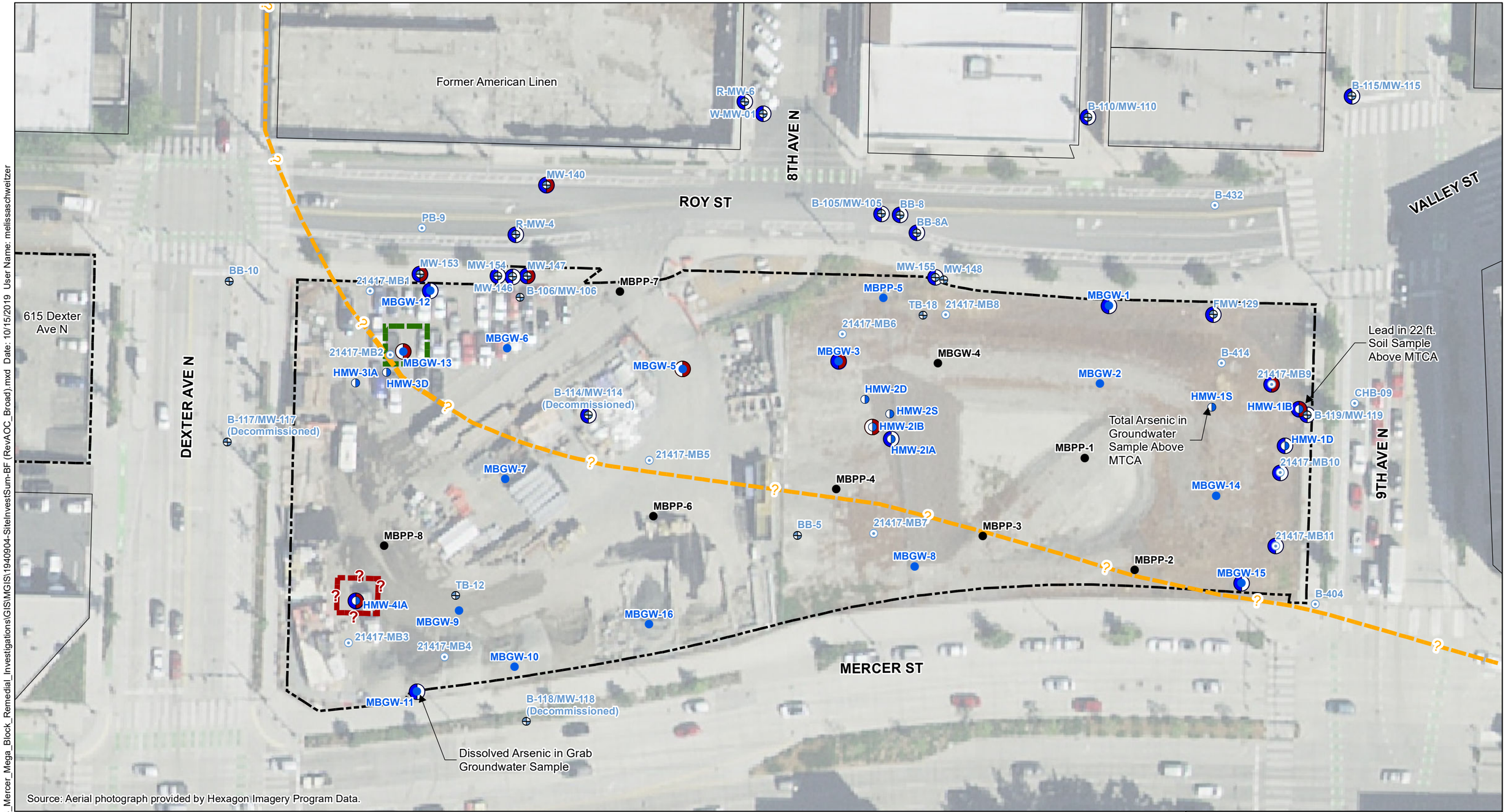
**Inferred Extent of Contamination**
**615 Dexter**

19409-04 10/19

HARTCROWSER

Figure
**51**

Document Path: L:\Notebooks\19409\04_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\19409\04-SiteInvestSum-BE (RevAOC_615Dex).mxd Date: 10/10/2019 User Name: melissaschweitzer




Source: Aerial photograph provided by Hexagon Imagery Program Data.

## Legend

**Hart Crowser Explorations**
- Boring
- Monitoring Well

S = Shallow
IA = Intermediate Shallow
IB = Intermidiate Deep
D = Deep

**Historical Explorations**
- Boring
- Monitoring Well

**Soil and Groundwater Detections**
- Soil Sample with Exceedance
- Groundwater Sample with Exceedance
- Soil and Groundwater Sample with Exceedance

- cVOC Groundwater Plume from Off Site Source
- Shallow Petroleum-Impacted Soil Area
- cVOCs in Groundwater (Source Unclear)
- Other Parcel Boundary
- MMB Parcel Boundary

Notes:
1. Samples were taken for all explorations shown.
2. Explorations in blue denote groundwater sample data.
3. Feature locations are approximate.

0 25 50 100 Feet

N

Mercer Megablock
Seattle, Washington

**Inferred Extent of Contamination**
**Broad Block**

19409-04 10/19

HARTCROWSER

Figure **52**

Document Path: L:\Notebooks\1940904_Mercer_Mega_Block_Remedial_Investigations\GIS\MGIS\1940904-SiteInvestSum-BF (RevAOC_Broad).mxd Date: 10/15/2019 User Name: melissaschweitzer