



***Contaminated Media Management Plan  
Oregon Lithoprint aka  
News Register Site  
609 NE Third Street  
McMinnville, Oregon***

**Prepared for:  
Oregon Lithoprint, Inc.**

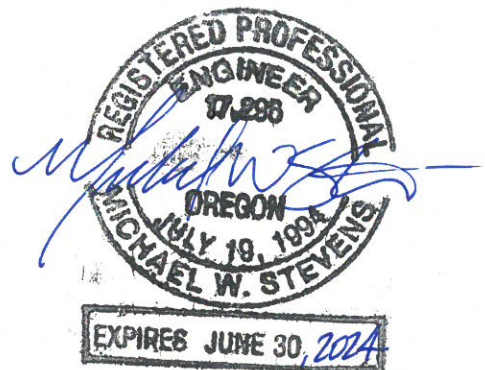
**July 20, 2022  
2442-00**



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Principal Engineer

A blue ink signature of Herb Clough, consisting of a large, stylized 'H' followed by a horizontal line.

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Herb Clough, P.E.  
V.P., Principal Engineer

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## Table of Contents

1.0 INTRODUCTION .....	1
1.1 Purpose and Use.....	1
1.2 Applicability.....	1
1.3 Limitations .....	1
2.0 BACKGROUND .....	2
2.1 Site Location and Physical Setting .....	2
2.2 Site Geology and Hydrogeology.....	3
2.3 Environmental Conditions and Contaminants of Potential Concern .....	3
2.4 Applicability and Scope .....	6
3.0 CONTAMINATED SOIL MANAGEMENT .....	8
3.1 Characterization of Soil .....	8
3.2 Soil Handling .....	8
3.3 Final Disposition of Soil .....	9
4.0 CONTAMINATED GROUNDWATER MANAGEMENT.....	10
4.1 Characterization of Groundwater.....	10
4.2 Groundwater Handling.....	10
4.3 Final Disposition of Groundwater.....	11
5.0 REPORTING.....	12
6.0 HEALTH AND SAFETY TRAINING AND PLANNING .....	12
7.0 REFERENCES .....	14

### Tables

1	Recent Groundwater Analytical Results
2	Recent Soil Analytical Results

### Figures

1	Site Location Map
2	Site Plan
3	Recent Groundwater Results – Benzene (2019 – 2022)
4	Recent Groundwater Results – TPHg (2019 – 2022)
5	Soil Results – Benzene
6	Soil Results – TPHg
7	Soil and Groundwater Management Areas

## **1.0 Introduction**

This contaminated media management plan (CMMP) was prepared to address residual petroleum contamination that may be encountered in soil and groundwater in the vicinity of the Oregon Lithoprint site located at 609 NE Third Street, McMinnville, Yamhill County, Oregon (the Site; Figure 1). The Oregon Department of Environmental Quality (DEQ) has created a Leaking Underground Storage Tank (LUST) file for the Site (LUST File No. 36-85-4001) in connection with historical releases from two 1,000-gallon gasoline underground storage tanks (USTs) located in the Ford Street right-of-way to the west of the O'Dell Building (the DEQ refers to the Site as the News Register Site in the LUST record).

### **1.1 Purpose and Use**

The purpose of this CMMP is to provide guidance on the procedures for appropriate management of soil and groundwater at the Site that may contain chemicals above certain screening levels. This CMMP provides:

- Identification of soil management areas requiring appropriate handling of soil;
- Information needed to properly handle the soil within the identified soil management area during future Site activities (if any);
- Information needed to properly handle on-site groundwater; and
- Information needed to make informed decisions regarding the health and safety of Site workers.

This CMMP is intended to provide instruction regarding restrictions on Site activities and/or handling requirements for impacted media that would be encountered in identified areas at the Site.

### **1.2 Applicability**

This CMMP provides guidance on the requirements for handling soil and groundwater within defined management areas. This CMMP is specific to the benzene and gasoline-range total petroleum hydrocarbons (TPHg) impacts that are associated with historical releases of gasoline from former underground storage tanks (USTs) associated with the O'Dell Building (the Former O'Dell Building Gasoline USTs). This plan is not applicable to other contamination that may be encountered at the Site, which may be subject to requirements that are not identified in this plan. The management areas correspond to the estimated extent of soil and groundwater containing petroleum constituents above applicable or relevant screening criteria. Soil and groundwater encountered in these areas shall be assumed to contain benzene and TPHg unless the requirements described in Section 3.1 and 4.1 demonstrate that the media is clean.

### **1.3 Limitations**

The scope of this CMMP is intended to provide guidance on the identification and proper handling of soil or groundwater that does or may contain petroleum constituents that are associated with historical releases of

gasoline from site USTs (i.e. the benzene and TPHg contamination) above regulatory screening levels. This CMMP is not intended to characterize potential human health or environmental risks associated with impacts from covered releases from the site USTs and shall not be relied upon as evidence of such risks. This CMMP also describes limited non-petroleum contamination (e.g., tetrachloroethene, trichloroethene, and other chlorinated hydrocarbons) that was encountered during the investigation of the covered releases from the site USTs that is not associated with the covered releases. However, this CMMP is not intended to be used in managing known and potential contamination that is not associated with the historical releases of gasoline from site USTs. Persons conducting activities in the defined management areas should take care to review existing sampling results (see Section 7.0 for references to Site environmental reports) as well as results from any future sampling to determine whether other soil or groundwater sampling or handling requirements may be applicable to their activities. Finally, this CMMP also is not intended to provide health and safety recommendations for the protection of Site workers or construction personnel. Persons involved in construction activities or Site operations that could result in exposure to Site soil or groundwater should be familiar with the content of this CMMP but should also have a Health and Safety Plan (HASP) prepared specific to the scope of their work. Minimum requirements for a HASP are contained in Section 6.0 below. Any unintended use of, or reliance on, this CMMP by any third party is at that party's sole risk

## **2.0 Background**

The following sections describe the site location, history, and geology/hydrogeology.

### **2.1 Site Location and Physical Setting**

The Site is located at the intersection of NE Third Street and NE Ford Street in McMinnville, Oregon (Figure 1). The properties included in the Site are used for commercial purposes as described below:

- 609 NE Third Street: The O'Dell Building;
- 305 NE Ford Street: The Odd Fellows Building (also known as the Sidway Building and Third Street Flats Building);
- The City Right-of-Way for NE Ford Street between the two site buildings; and
- The City Right-of-Way for NE Third Street on either side of the intersection with NE Ford Street.

All properties within the Site are zoned as commercial (C-3). Residential use is allowed by the zoning code but is considered unlikely based on the use and layout of the existing buildings.

Several below-grade utilities are present at the Site and include sanitary and storm sewer lines, historical wooden steam heat lines, electric, street-light, telecommunications, and natural gas lines. The stormwater lines are three to four feet below the ground surface (bgs), and the sanitary sewer lines are between 6.34 feet and 9.74 feet bgs. The wooden steam lines are associated with a former steam power plant located two

blocks west of the Site and are at unknown locations and depths. Based on City staff observations at other locations, they are not likely deep below ground surface.

## **2.2 Site Geology and Hydrogeology**

This section summarizes Site topography, geology, and hydrogeology based on observations made during investigation activities.

### **2.2.1 Topography and Geology**

The Site is located between 148 feet and 149.5 feet above mean sea level (MSL) and is relatively flat. The nearest surface water body is Cozine Creek, located approximately 1,400 feet south of the Site.

According to the Geologic Map of Oregon (USGS, 1991), the Site is underlain by Quaternary Surficial Deposits that are comprised of unconsolidated alluvium and lacustrine sediments (including clay, silt, sand, and gravel). Subsurface materials encountered in previous investigations included silts and clayey silts. Localized gravel fill was historically observed within the Former O'Dell Building Gasoline USTs excavation area and utility trenches installed in the O'Dell Building.

### **2.2.2 Hydrogeology**

Six groundwater monitoring wells (MW-1 through MW-6) are located in the Right of Way (ROW) near the intersection of NE Ford Street and NE Third Street. Based on previously advanced soil borings and data from the monitoring wells, depth to groundwater at the Site generally ranges between 3.4 feet and 13.4 feet bgs. The groundwater flow direction is primarily to the south/southwest, towards Cozine Creek, which is approximately 1,400 feet south of the Site (see Figure 3). The hydraulic gradient at the Site is typically to the southwest at a range of between 0.011 feet/foot and 0.025 feet/foot, with an average gradient of 0.016 feet/foot.

## **2.3 Environmental Conditions and Contaminants of Potential Concern**

This section discusses the environmental conditions and contaminants of potential concern (COPCs) on the Site.

### **2.3.1 Environmental Conditions**

**Former Underground Storage Tanks.** The Site has been impacted by historical releases of gasoline from the Former O'Dell Building Gasoline USTs at 609 NE Third Street, as well as other sources. The following four former decommissioned USTs were located at the O'Dell Building and surrounding properties:

- **Former O'Dell Building Gasoline USTs.** Two former 1,000-gallon gasoline USTs were located in the Ford Street ROW to the west of the O'Dell Building. One of the tanks was decommissioned in-place in 1971 following reports of gasoline odors in businesses in the Odd Fellows Building and in two businesses one block to the west. Both gasoline USTs were removed in 1985. Businesses one block west of the O'Dell Building reported gasoline odors in 1985, prompting the UST removal. Soil and groundwater contamination were identified during the 1985 tank decommissioning activities and reported to DEQ (LUST File No. 36-85-4001). News Register records estimated that approximately 2,000 gallons of gasoline were released to the subsurface before the tanks were decommissioned. A product recovery well was installed within the UST pit in 1985. Records indicate that between 114 gallons and 400 gallons of product were removed from the recovery well between October 1985 and May 1986. Since the Former O'Dell Building Gasoline USTs were removed in 1985, there have been no reports of gasoline odors at the Site.
- **O'Dell Building Alley UST.** One former 540-gallon heating oil UST was located adjacent to the north side of the O'Dell Building. The UST may have also been formerly used to store diesel for generator fuel. It was decommissioned in-place in February 1998. This UST is upgradient from the Former O'Dell Building Gasoline USTs. Soil sampling indicated that a release from the UST had not occurred. No field evidence of contamination (i.e. odor, staining, or sheen) was observed during the decommissioning activities. Groundwater was not encountered during the decommissioning activities.
- **Odd Fellows Building UST.** A former decommissioned heating oil UST associated with the Odd Fellows Building was located west of the O'Dell Building across NE Ford Street in the ROW, below the sidewalk, near the southeast corner of the Odd Fellows Building. The UST was decommissioned in-place in January 2014.

### ***2.3.2 Historical Site Investigations***

Numerous site investigation activities have occurred at the Site since 1985. Historical investigations have been conducted in connection with the decommissioning of the former O'Dell Building Gasoline USTs, and in connection with efforts to determine the extent of potential impacts from historical releases from the USTs. During these investigations, the extent and magnitude of petroleum hydrocarbons originating from the USTs has been defined. The chronology and scope of these early investigations, which focused primarily on delineating the extent and magnitude of gasoline-related contamination at the Site, are discussed in the reports referenced in Section 7.

Concentrations of petroleum-related contaminants detected during recent investigations between February 2019 and May 2022 have included:

## DRAFT

Analyte	Maximum Soil Concentration (mg/kg)	Construction Worker/Excavation Worker RBC	Maximum Groundwater Concentration (µg/L)	GW in Excavation RBC
Benzene	1.42 (ODB-3)	380	<b>4,010</b> (MW-4)*	1,800
n-Butylbenzene	8.46 (SB-2)	NA	9.04 (MW-2)	NA
sec-Butylbenzene	4.68 (SB-2)	NA	9.83 (MW-2)	NA
tert-Butylbenzene	0.084 (SB-2)	NA	0.491 (MW-2)	NA
Ethylbenzene	22.3 (ODB-3)	1,700	1,790 (MW-2)	4,500
Isopropylbenzene	4.54 (ODB-7)	27,000	102 (MW-6)	51,000
p-isopropyltoluene	2.85 (SB-9)	NA	1.79 (MW-3)	NA
Naphthalene	6.21 (ODB-3)	580	190 (MW-2)	500
n-Propylbenzene	23.3 (ODB-7)	NA	186 (MW-6)	NA
Toluene	0.0536 (SB-6)	28,000	12.7 (MW-4)	220,000
1,2,3-Trimethylbenzene	18.3 (ODB-3)	NA	182 (MW-2)	NA
1,2,4-Trimethylbenzene	65.3 (ODB-3)	2,900	39.4 (MW-6)	6,300
1,3,5-Trimethylbenzene	17.7 (ODB-3)	2,900	17.1 (MW-6)	7,500
Total Xylenes	32.9 (ODB-3)	20,000	51.4 (MW-6)	23,000
TPHg	4,180 (SB-2)	9,700	<b>14,500</b> (MW-2)	14,000

Note: **Bold** values highlight exceedance of associated risk-based concentration (RBC).

\* MW-5 had one detection of 5,870 µg/L in October 2019, but evaluation of this data has concluded that the result was anomalous and not indicative of typical groundwater conditions in the vicinity of the Site.

Several non-petroleum contaminants that are not associated with the former USTs at the Site have also been detected in groundwater samples collected at the Site between February 2019 and July 2020:

Analyte	Detections (Well and Date)	GW in Excavation RBC (µg/L)
Trichloroethene	MW-1 (0.979 µg/L, 10/17/19); MW-2 (4.74 µg/L, 10/17/19)	430 µg/L
1,1-Dichloroethene	MW-1 (1.46 µg/L, 10/17/19)	44,000 µg/L
cis-1,2-Dichloroethene	MW-1 (0.445 µg/L, 10/17/19); MW-2 (29.9 µg/L, 10/17/19); MW-3 (0.676 µg/L, 10/17/19)	18,000 µg/L
trans-1,2-Dichloroethene	MW-2 (12.2 µg/L, 10/17/2019)	180,000 µg/L
Carbon tetrachloride	MW-2 (0.436 µg/L, 10/17/19)	1,800 µg/L
1,1,2-Trichloroethane	MW-1 (0.436 µg/L, 10/17/19)	49 µg/L



In summary, impacts to soil in recent sampling events have been limited to petroleum hydrocarbons at concentrations that are consistently below the excavation/construction worker RBCs. Impacts to groundwater are predominantly petroleum-related, though several wells have historically had detections of other analytes originating from other sources. With the limited exceptions of benzene and TPHg, detected analyte concentrations in groundwater were generally below the excavation worker RBCs.

The most recent monitoring (completed in July 2020 and November 2021) shows that the magnitude of the petroleum impacts observed in the site groundwater monitoring wells is on a decreasing concentration trend, but residual contamination exists beneath the O'Dell Building, the Odd Fellows Building, and the adjacent rights-of-way for NE Ford Street and NE Third Street. In the July 2020 groundwater monitoring event, exceedances of the Oregon DEQ RBCs were limited to benzene and TPHg in MW-4 (located south of the Odd Fellows Building) and benzene in MW-2 (located south of the O'Dell Building).

### **2.3.3 Contaminants of Potential Concern**

The analytes that have been detected in recent sampling events at concentrations that are above laboratory method reporting limits are those that are listed in the tables above. Of these detected analytes, only TPHg and benzene in Site groundwater have been detected at concentrations above the DEQ's risk-based screening levels for exposure to groundwater in an excavation. Therefore, the COPCs for the Site include benzene and TPHg.

As referenced in the *Site Investigation Summary Report* (Apex, 2022), residual contamination in soil and groundwater does not currently pose a risk to human health or the environment through the existing risk exposure pathways, which do not include direct contact exposures. However, in the event that activities at the Site may have the potential for direct exposures, such as during property development or construction, underground utility work, or other subsurface disturbance, the contaminated media will need to be managed properly to effectively eliminate potential risks. This plan provides the scope for managing the contaminated media.

## **2.4 Applicability and Scope**

This section discusses soil and groundwater management requirements for COPCs (benzene and TPHg) in Site soil and groundwater. Information related to health and safety considerations is discussed in Section 6. The health and safety standards are in addition to requirements that may be imposed on construction projects under federal, state, or local regulations.

**Applicability.** The requirements of this plan shall apply to soil and groundwater within the management areas shown on Figure 7, and only for the COPCs (benzene and TPHg). The management areas for soil and groundwater at the Site are defined by the areas shown on Figure 7. The defined management areas correspond to soil or groundwater containing chemicals above applicable or relevant screening criteria. Soil

and groundwater within these areas shall be assumed to contain the COPCs and are to be handled in accordance with Sections 3 and 4 for soil and groundwater, respectively. If evidence of contamination is observed elsewhere at the Site (such as observations of an odor or stained soil), the material must also be tested and handled as described in this CMMP. If the soil or groundwater being managed is impacted by other contaminants (i.e., has analyte concentrations above the laboratory reporting limits), then other restrictions may apply to the management and disposal of those wastes as appropriate based on the regulatory action levels for that analyte (but these conditions are not governed by this CMMP and will need to be addressed by a qualified professional).

**Scope.** Soil management shall consist of the following steps:

- 1) Characterize the soil to be disturbed in accordance with Section 3.2.
  - a) If benzene and TPHg concentrations are below detection limits or the Clean Fill screening levels published by DEQ (DEQ, 2019), the soil is not visibly stained, and the soil does not have a chemical odor, then no special handling is required<sup>1</sup> (“unrestricted use”) and skip to Step 4.
  - b) If chemicals are present above the unrestricted use criteria, the soil is visibly stained, or the soil has a chemical odor, then proceed to Step 2.
- 2) Handle soil in accordance with the requirements in Section 3.3.
- 3) For final disposition of excavated soil, follow the requirements of Section 3.4.
- 4) Prepare and file a report in accordance with Section 5.0.

Groundwater management shall consist of the following steps:

- 1) Characterize the groundwater to be disturbed in accordance with Section 4.1.
  - a) If benzene and TPHg concentrations are below detection limits, then handling of any removed groundwater is unrestricted, unless other regulations apply (such as a permitted sewer discharge).
  - b) If chemicals are detected, proceed to Step 2.
- 2) Handle groundwater in accordance with the requirements in Section 4.2.
- 3) For final disposition of removed groundwater, follow the requirements of Section 4.3.
- 4) Prepare and file a report in accordance with Section 5.0.

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<sup>1</sup> Note that the Clean Fill determination process applies only to terrestrial (upland) reuse or disposal. The Clean Water Act and associated state water quality rules, rather than the solid waste rules, govern the filling of wetlands or waters of the state.

### **3.0 Contaminated Soil Management**

This CMMP was prepared to support managing soil in the soil management area. The soil management area (Figure 7) has been established based on the currently understood extent of chemical concentrations at and near the Site, and the current land use. The soil management area may be revised in the future if remedial actions or additional investigation activities are completed.

#### **3.1 Characterization of Soil**

The concentrations in soil are shown on Figures 3 and 4, and recent sample results (May 2022) are shown on Table 2. Soil to be disturbed by activities within the soil management area shown on Figure 7 shall be characterized for proper handling and disposition. Characterization may be conducted either prior to or after the soil-disturbing activity. The disposal of soil removed from the Site may include additional waste characterization criteria imposed by the disposal facility.

**Characterization Prior to Soil Disturbance.** Soil samples shall be collected in accordance with generally accepted environmental practices at the time of soil disturbance and under the direction of a qualified professional. At a minimum, soil samples shall be analyzed for the following:

- Petroleum VOCs (BTEX) by EPA Method 8021 or 8260; and,
- TPHg by Northwest Method NWTPH-Gx.

If disturbed soil may be removed from the Site and disposed of at a regulated facility, the potential disposal facility shall be contacted for any other testing that may be required for acceptance for disposal. Soil removed after characterization must be entirely from the envelope of the characterization samples (i.e. the characterization samples must surround the excavated area on all sides), otherwise the soil is to be handled as described below for characterization after excavation.

**Characterization after Excavation.** If soil is characterized after excavation, the soil shall be presumed to contain benzene and TPHg until testing demonstrates otherwise. The soil shall be handled in accordance with Section 3.3. Stockpiles shall be sampled at a frequency and using procedures in accordance with generally accepted environmental practices at the time of the work. At a minimum, soil samples shall be sampled and analyzed at a frequency no less than one sample per 100 cubic yards of excavated material and as defined above, or as otherwise prescribed by a qualified environmental professional. The potential disposal facility shall be contacted for any other testing that may be required for acceptance for disposal.

#### **3.2 Soil Handling**

Until demonstrated otherwise (such as by the characterization described in Section 3.1), soil from the soil management area shown on Figure 7 shall be presumed to contain benzene and TPHg, and shall be handled

in accordance with the procedures in this section. The procedures in this section are in addition to the normal requirements for handling soil without chemicals and any City of McMinnville requirements for erosion and sedimentation control.

**Soil Excavation.** Excavated soil that contains benzene or TPHg above Clean Fill screening levels shall be maintained within the limits of the excavation, stockpiled in accordance with this plan, or placed immediately into a waiting truck.

**Stockpiling.** Excavated soil that is not immediately removed from the Site shall be placed in a covered roll-off box or in a covered stockpile. Stockpiles shall be maintained in a manner that prevents runoff, and erosion of the stockpiles. Stockpiles shall be placed on plastic sheeting with a berm around the perimeter of the stockpile. The berm may be constructed by laying the bottom plastic over straw bales, Jersey Barriers, ecology blocks, or by other equivalent methods. When not active, stockpiles shall be covered with plastic and secured with sand bags or equivalent to prevent displacement of the plastic cover. The soil shall remain in well-maintained stockpiles until testing is completed and final disposition is determined. Once sampled, no soil shall be added to a stockpile. Following the removal of the stockpile, any exposed soil from beneath the stockpile shall be tested for benzene and TPHg and if detected the impacted soil shall be removed and handled in accordance with this CMMP.

**Loading and Hauling.** Excavated soil may be loaded into trucks for hauling to a disposal facility directly from the excavation or from a temporary stockpile as discussed above. During loading, care shall be taken to minimize spillage of soil on the exterior of the trucks or clean ground surface. Any soil on the truck exterior shall be removed prior to leaving the loading area. The trucks shall be covered with a tarp prior to departing the Site. Trucks shall not be allowed to leave the Site if liquids are draining from the load. Excavated soil shall be transported in accordance with appropriate Department of Transportation (DOT) regulations.

### 3.3 Final Disposition of Soil

The results of the characterization testing (Section 3.1) shall be used to determine the final disposition of excavated soil, as follows.

- If the COPCs are not detected in the soil samples, or if the concentrations of all COPCs are below the respective Clean Fill criteria, then this plan places no additional restrictions on the soil handling or disposition than would ordinarily apply from applicable state and federal regulations. The detection of other analytes is not addressed by this CMMP and would need to be addressed separately by a qualified professional.
- If benzene or TPHg is detected above the Clean Fill criteria, then the soil shall be properly characterized and disposed of at an offsite licensed facility permitted to accept solid wastes impacted by petroleum hydrocarbons (such as, but not limited to, a Subtitle D landfill or soil treatment facility). It is the responsibility of the party handling the soil to properly characterize and dispose of the soil,

including addressing any additional waste characterization criteria that may be imposed by the disposal facility. The DEQ maintains a list of active permitted waste facilities (<https://www.deq.state.or.us/lq/sw/disposal/permitedfacilities.htm>).

## **4.0 Contaminated Groundwater Management**

This CMMP was also prepared to support managing groundwater in the groundwater management area. The groundwater management area (Figure 7) has been established based on the currently understood extent of chemical concentrations at and near the Site. The groundwater management area may be revised in the future as remedial actions or additional investigation activities are completed.

### **4.1 Characterization of Groundwater**

Groundwater concentrations from the current and historical monitoring events (2002 through July 2020) are shown on Figures 5 and 6 and on Table 1, and the groundwater management area is shown on Figure 7. The extent of the groundwater management area is based on the extrapolation of groundwater concentrations encountered in the immediate vicinity of the Site and may vary from actual conditions. The groundwater management area includes both the Site and off-Site properties. The management area includes only the shallow groundwater that is typically encountered at depths of between 9 and 19 feet bgs.

Groundwater to be disturbed by activities within the groundwater management area shown on Figure 7 shall be characterized for proper handling and disposition. Characterization may be conducted when groundwater is encountered in excavations or during dewatering during construction activities. Representative groundwater samples must be collected in accordance with generally accepted environmental practices at the time of the work. At a minimum, groundwater samples shall be analyzed for the following:

- Petroleum VOCs (BTEX) by EPA Method 8021 or 8260; and,
- TPHg by Northwest Method NWTPH-Gx.

For the purposes of the CMMP, contaminated groundwater is defined by DEQ rules (OAR Chapter 340, Division 122) as groundwater with concentrations of hazardous substances (i.e., petroleum constituents) greater than the laboratory detection limit. Thus, any groundwater that has detectable concentrations of petroleum hazardous substances (i.e., the benzene and TPHg contamination) is considered contaminated media.

### **4.2 Groundwater Handling**

Until demonstrated otherwise (such as by the characterization described in Section 4.1), groundwater from the groundwater management area shown on Figure 7 shall be presumed to be contaminated groundwater

and shall be handled in accordance with the procedures in this section. The procedures in this section are in addition to requirements for handling groundwater without hazardous substances detections.

Any groundwater removed from the vicinity of the groundwater management area shall be containerized on-site or loaded directly into trucks or tanks/vessels for hauling to a disposal facility. During loading, care shall be taken to prevent spillage of groundwater from the tank or truck. Any groundwater spills shall be immediately stopped and the water shall be cleaned up; soil impacted by spilled water should be tested and removed in accordance with Section 3 if contaminated or assumed to be contaminated. After containerization, the water may be tested as described above and handled appropriately and disposed of in accordance with section 4.3.

It is recommended that groundwater be removed from the Site only to the extent that it is necessary to allow construction and redevelopment activities to occur. Alternative approaches that do not require groundwater removal would be preferred. Groundwater removal and handling shall be completed in a manner that prevents exacerbation of existing conditions and does not interfere with potential future investigation or cleanup activities at the Site. Pumping (such as for excavation dewatering) in the near vicinity of the groundwater management area may cause contaminated groundwater to migrate from its current location to the pumped area and should therefore be avoided. If such near-vicinity pumping is unavoidable, then measures must be included that prevent such uncontrolled migration (such as, but not limited to, more aggressive pumping from within the groundwater management area so that the net change in the groundwater gradient is toward the Site and the migration is controlled). If testing results of water pumped from outside of the groundwater management area show detected concentrations of benzene or TPHg then the water is to be managed in accordance with this plan.

### 4.3 Final Disposition of Groundwater

The results of the characterization testing (Section 4.1) shall be used to determine the final disposition of any removed groundwater, as follows:

- If groundwater encountered in excavations during construction activities has been evaluated and shows no evidence of contamination, disposal of removed groundwater is not restricted by this plan and may be managed under any permitted means (for example, City's NPDES-permitted stormwater sewer system or sanitary sewer).
- If the removed groundwater is found to be contaminated by detected concentrations of benzene or TPHg, the groundwater will be characterized and disposed of at an offsite licensed facility permitted to accept petroleum-impacted water. It is the responsibility of the party handling the water to properly characterize and dispose of the water, including addressing any additional waste characterization criteria that may be imposed by the disposal facility. The DEQ maintains a list of active permitted waste facilities (<https://www.deq.state.or.us/lq/sw/disposal/permitedfacilities.htm>).

## **5.0 Reporting**

A brief letter report shall be prepared presenting the results of all sampling and chemical analysis and documenting the final disposal of any soil/groundwater that was disturbed and/or removed. At a minimum, the letter report shall include:

- A Site plan showing sample locations and the location of the work;
- Summary tables of analytical results;
- Discussion of field observations and results;
- Documentation of quantities and final disposition of soil/groundwater, including a Site plan if soil/groundwater is left at the Site;
- Completed DEQ Waste Generation and Management form(s) for the disposal;
- Copies of soil/groundwater disposal receipts, if applicable; and
- Analytical laboratory reports.

The report shall be submitted to the DEQ to include in the project file.

## **6.0 Health and Safety Training and Planning**

This section addresses health and safety and training in addition to that which is normally conducted for construction activities. Any party completing any activity that may disturb soil or groundwater within the management areas at the Site as defined on Figure 7 must comply with the following standards.

**Training.** Employees engaged in activities that may include exposure to media containing or assumed to contain chemicals are to be trained in accordance with 29 CFR 1910.120. Training will not be required for work areas that have been characterized (prior to the work activities) and shown not to contain chemicals at concentrations above the unrestricted use criteria (such as the DEQ clean fill standards for soil or being below the most restrictive of the DEQ RBCs [typically the residential RBCs]), or where a risk analysis completed by a qualified professional demonstrates that the chemicals will not pose an unacceptable risk to the Site workers. If it is uncertain whether training is necessary, the services of an Industrial Hygienist may be warranted to review the data prior to implementation.

**Health and Safety Plan.** The party in charge of the Site activities shall prepare and implement a HASP in accordance with Occupational Safety and Health Act (OSHA) requirements (i.e. 29 CFR 1910.120) and OARs. The HASP shall be prepared by a Certified Industrial Hygienist or qualified safety professional with a minimum of 40 hours of OSHA HAZWOPER training. The HASP shall identify and address, but not be limited to, the physical and chemical hazards of the Site and the proposed activities. The HASP content shall, at a minimum, describe the following:

- Required personal protective equipment (PPE);
- Site safety supervisor;
- Action levels at which protection would be upgraded;
- Controls to be used to minimize worker exposure to hazardous substances;
- Exclusion, contamination reduction, and clean zones;
- Personnel decontamination procedures;
- Route to hospital; and
- Monitoring equipment to be employed.

Data tables from soil and groundwater investigations within and near the management areas are included in the *Site Investigation Summary Report* (Apex, 2022). The tables provide a guideline for the magnitudes of chemicals encountered in the management areas. If future remedial actions are completed within the LOF, these data will be obsolete and subsequent sampling would need to be conducted to inform future health and safety assessments.



## **7.0 References**

- Apex, 2019a. *Summary Report – Soil and Groundwater Sampling. Oregon Lithoprint aka News Register Site. 609-611 NE Third Street, McMinnville, OR.* April 5, 2019.
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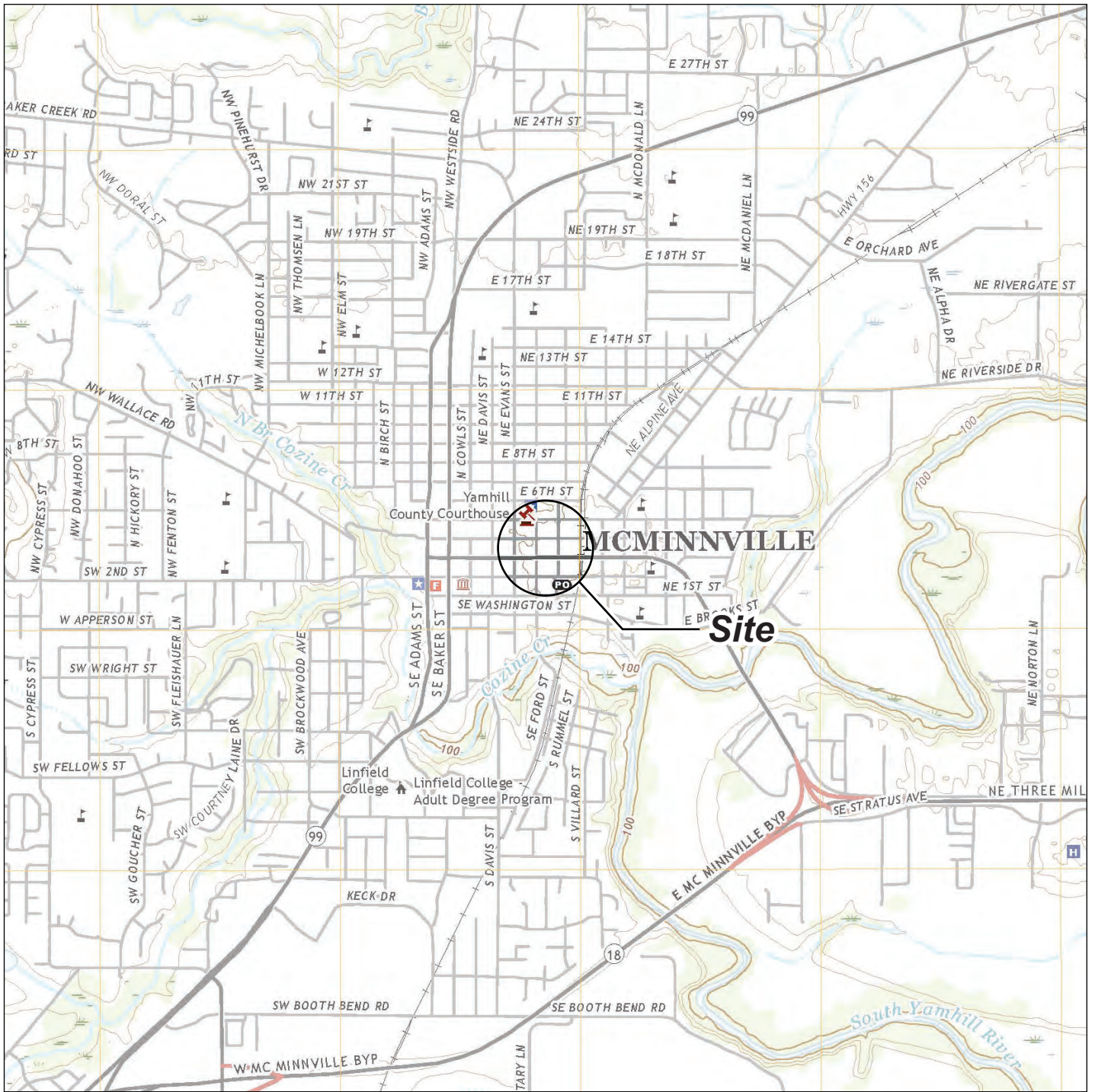
Table C-1  
Groundwater Analytical Results  
Oregon Lithoprint  
McMinnville, Oregon

Sample Location ID	MW-5						MW-6						DEQ Risk-Based Concentrations			
	Date	2/14/2019	10/17/2019	1/30/2020	4/16/2020	7/17/2020	11/22/2021	2/14/2019	10/17/2019	1/30/2020	4/16/2020	7/17/2020	11/22/2021	GW in Excavation   Construction and Excavation Worker	Groundwater Vapor Intrusion into Buildings   Urban Residential	Vapor Intrusion into Buildings   Occupational
Volatile Organic Compounds (µg/L)																
Acetone	<50.0 UJ	<50.0	<50.0	<50.0	<50.0	<50.0 UJ	<50.0 UJ	<50.0	<2500	74.1 J	<50.0	<50.0 UJ	--	--	--	
Acrolein	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0 UJ	<50.0	<50.0	<2500	<250	<50.0	<50.0	--	--	--	
Acrylonitrile	<10.0 UJ	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 UJ	<10.0	<500	<50.0	<10.0	<10.0	250	1,700	9,200	
Benzene	<1.00	5.870	16.3	<1.00	96.3	<1.00	89.2	200	406	51.3	9.86	0.490 J	1,800	510	2,800	
Bromobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
Bromodichloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	450	420	2,300	
Bromoform	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	14,000	85,000	470,000	
Bromomethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<250	<25.0	<5.00	<5.00	1,200	2,100	27,000	
n-Butylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.14	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
sec-Butylbenzene	<1.00	1.03	<1.00	<1.00	0.162 J	<1.00	9.53	1.89	<50.0	4.40 J	3.90	1.39	--	--	--	
tert-Butylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.417 J	<50.0	<5.00	0.391 J	0.432 J	0.432 J	--	--	--	
Carbon Tetrachloride	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	1,800	220	1,200	
Chlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	10,000	67,000	--	
Chlorodibromomethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	610	2300	13,000	
Chloroethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<250	<25.0	<5.00	<5.00	2,400,000	2,800,000	--	
Chloroform	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<250	<25.0	<5.00	<5.00	720	290	1,600	
Chloromethane	<2.50	<2.50 UJ	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50 UJ	<125	<12.5	<2.50	<2.50 UJ	22,000	26,000	330,000	
2-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
4-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,2-Dibromo-3-Chloropropane	<5.00 UJ	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00 UJ	<5.00	<250 UJ	<25.0	<5.00	<5.00 UJ	--	--	--	
1,2-Dibromoethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	27	110	590	
Dibromomethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,2-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	37,000	--	--	
1,3-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,4-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	1,500	1,300	7,100	
Dichlorodifluoromethane	<5.00	<5.00 UJ	<5.00	<5.00	<5.00	<5.00	<5.00 UJ	<5.00	<250	<25.0	<5.00	<5.00	--	--	--	
1,1-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	10,000	2,600	14,000	
1,2-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	1.14	0.571 J	630	700	3,900	
1,1-Dichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	44,000	29,000	360,000	
cis-1,2-Dichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	18,000	--	--	
trans-1,2-Dichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	180	--	--	
1,2-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,1-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
cis-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
trans-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
2,2-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00 UJ	<1.00	--	--	--	
di-Isopropyl Ether	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
Ethylbenzene	<1.00	24.8	<1.00	<1.00	<1.00	<1.00	661	4.76	1,120	172	0.761 J	<1.00	4,500	1,500	8,200	
Hexachloro-1,3-Butadiene	<1.00	<1.00	<1.00	<1.00	<1.00 UJ	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
Isopropylbenzene	<1.00	16.1	<1.00	<1.00	0.249 J	<1.00	59.3	4.90	102	34.5	11.6	4.09	51,000	--	--	
p-Isopropyltoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.898 J	0.585 J	<50.0	<5.00	0.545 J	<1.00	--	--	--	
2-Butanone (MEK)	<10.0 UJ	<10.0	<10.0	<10.0	<10.0	<10.0 UJ	<10.0	<10.0	<500	<50.0	<10.0 UJ	<10.0 UJ	--	--	--	
Methylene Chloride	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<250	<25.0	<5.00	<5.00	79,000	160,000	3,300,000	
4-Methyl-2-Pentanone (MIBK)	<10.0 UJ	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0 UJ	<10.0	<500	<50.0	<10.0	<10.0	--	--	--	
Methyl Tert-Butyl Ether	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	63,000	160,000	870,000	
Naphthalene	<5.00 UJ	<5.00	<5.00	<5.00 UJ	<5.00 UJ	<5.00	28.0 J	<5.00	<250 UJ	<25.0	<5.00	<5.00	500	2,000	11,000	
n-Propylbenzene	<1.00	4.3	<1.00	<1.00	<1.00	<1.00	186	4.89	237	79.1	19.1 J	0.614 J	--	--	--	
Styrene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	170,000	--	--	
1,1,1,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,1,2,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,1,2-Trichlorotrifluoroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	5,600	8,700	48,000	
Toluene	<1.00	5.51	<1.00	<1.00	<1.00	<1.00	0.499 J	0.935 J	<50.0	<5.00	0.298 J	<1.00	220,000	--	--	
1,2,3-Trichlorobenzene	<1.00 UJ	<1.00	<1.00	<1.00	<1.00 UJ	<1.00	<1.00 UJ	<1.00	<50.0 UJ	<5.00	<1.00	<1.00	--	--	--	
1,2,4-Trichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0 UJ	<5.00	<1.00	<1.00	--	--	--	
1,1,1-Trichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	1,100,000	--	--	
1,1,2-Trichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	49	1,000	11,000	
Trichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<50.0	<5.00	<1.00	<1.00	430	430	3,700	
Trichlorofluoromethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<250	<25.0	<5.00	<5.00	160,000	36,000	460,000	
1,2,3-Trichloropropane	<2.50 UJ	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50 UJ	<2.50	<125	<12.5	<2.50	<2.50	--	--	--	
1,2,4-Trimethylbenzene	<1.00	0.538 J	<1.00	<1.00	<1.00	<1.00	17.7	0.452 J	26.0 J	2.34 J	<1.00	<1.00	6,300	50,000	--	
1,2,3-Trimethylbenzene	<1.00	1.54	<1.00	<1.00	<1.00	<1.00	2.31	<1.00	<50.0	<5.00	<1.00	<1.00	--	--	--	
1,3,5-Trimethylbenzene	<1.00	0.421 J	<1.00	<1.00</												

Table C-2  
Recent Soil Analytical Results  
Oregon Lithoprint  
McMinnville, Oregon

Sample Location Depth (feet)	DEQ Risk-Based Concentrations																						Soil Ingestion, Dermal Contact, and Inhalation   Occupational	Soil Vapor Intrusion into Buildings   Urban Residential	Soil Vapor Intrusion into Buildings   Occupational		
	ODB-1	ODB-2	ODB-3	ODB-4	ODB-5	ODB-6	ODB-7	ODB-8	ODB-9	ODB-10	ODB-11	ODB-12	ODB-12	ODB-13	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8				SB-9	SB-10
	8.5	9	9.5	9	9	9	9	11	11	9	11	9	14	11	12	12	10	10	12	12	10	12				10	10
Date	02/13/2019	02/13/2019	02/14/2019	02/14/2019	02/14/2019	02/14/2019	02/14/2019	10/14/2019	10/14/2019	10/15/2019	10/15/2019	10/14/2019	10/14/2019	10/14/2019	5/9/2022	5/9/2022	5/9/2022	5/9/2022	5/9/2022	5/9/2022	5/10/2022	5/10/2022	5/10/2022	5/10/2022			
<b>Volatile Organic Compounds (mg/kg)</b>																											
Acetone	<0.0347	<0.0338	<6.83	<0.692	<0.280	<0.268	<0.275	<b>0.202</b>	<0.0706	<0.0682	<0.0712	<0.0338	<0.681 UJ	<0.0668	<b>0.0888 J+</b>	<0.760	<b>1.91 J+</b>	<b>2.25 J+</b>	<0.0868	<b>7.11 J+</b>	<b>2.57 J+</b>	<b>1.65 J+</b>	<b>2.89 J+</b>	<b>8.32 J+</b>	--	--	--
Acrylonitrile	<0.0174	<0.0169	<0.137	<0.0173	<0.140	<0.134	<0.138	<0.0725	<0.0353	<0.0341	<0.0356	<0.0169	<0.340	<0.0334	<0.0219	<0.190	<b>0.287</b>	<b>0.714</b>	<0.0217	<0.0227	<0.0228	<0.0229	<0.0231	<0.0228	4	0.19	--
Benzene	<b>0.00452</b>	<b>0.0700</b>	<b>1.42</b>	<b>0.290</b>	<b>0.00726 J</b>	<b>0.329</b>	<b>0.691</b>	<b>0.326</b>	<b>0.339</b>	<b>0.00586</b>	<0.00285	<b>0.0347</b>	<b>0.159</b>	<b>0.135</b>	<0.00175	<b>0.0228</b>	<b>0.0236</b>	<0.00176	<b>0.00222</b>	<b>0.801</b>	<b>0.251</b>	<b>0.108</b>	<b>0.637</b>	<b>1.18</b>	37	0.38	2.1
Bromobenzene	<0.0174	<0.0169	<0.137	<0.0173	<0.140	<0.134	<0.138	<0.0725	<0.0353	<0.0341	<0.0356	<0.0169	<0.340	<0.0334	<0.0219	<0.190	<0.0225	<0.0220	<0.0217	<0.0227	<0.0228	<0.0229	<0.0231	<0.0228	--	--	--
Bromodichloromethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	15	0.096	0.53
Bromoforn	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	260	19	110
Bromomethane	<0.0174	<0.0169	<0.137	<0.0173	<0.140	<0.134	<0.138	<0.0725	<0.0353	<0.0341	<0.0356	<0.0169	<0.340	<0.0334	<0.0219	<0.190	<0.0225	<0.0220	<0.0217	<0.0227	<0.0228	<0.0229	<0.0231	<0.0228	750	1.3	17
n-Butylbenzene	<b>0.720</b>	<b>0.292</b>	<b>3.06</b>	<b>2.42</b>	<b>1.33</b>	<b>3.20</b>	<b>8.34</b>	<b>0.62</b>	<b>0.302</b>	<b>0.506 D</b>	<b>0.187</b>	<b>0.133</b>	<b>0.553</b>	<b>0.496</b>	<0.0219	<b>8.46</b>	<b>0.350</b>	<b>2.20</b>	<0.0217	<b>1.21</b>	<b>1.42</b>	<b>0.983</b>	<b>2.33</b>	<b>0.57</b>	--	--	--
sec-Butylbenzene	<b>0.235</b>	<b>0.132</b>	<b>1.54</b>	<b>0.898</b>	<b>0.727</b>	<b>1.53</b>	<b>3.45</b>	<b>0.294</b>	<b>0.15</b>	<b>0.258 D</b>	<b>0.133</b>	<b>0.0648</b>	<b>0.321 J</b>	<b>0.235</b>	<0.0219	<b>4.68</b>	<b>0.167</b>	<b>1.08</b>	<0.0217	<b>0.632</b>	<b>0.677</b>	<b>0.472</b>	<b>1.09</b>	<b>0.277</b>	--	--	--
tert-Butylbenzene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0540	<b>0.00447 J</b>	<0.0560	<b>0.0340 J</b>	<0.0290	<0.0141	<b>0.00438 J</b>	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<b>0.0840</b>	<0.00902	<b>0.0181</b>	<0.00868	<0.00909	<0.00915	--	--	--
Carbon Tetrachloride	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0540	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	34	0.28	1.6
Chlorobenzene	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	8,700	77	--
Chlorodibromomethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	17	0.53	2.9
Chloroethane	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0540	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	--	--	--
Chloroform	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	26	0.074	0.41
Chloromethane	<0.0174	<0.0169	<0.137	<0.0173	<0.140	<0.134	<0.138	<0.0725	<0.0353	<0.0341	<0.0356	<0.0169	<0.340	<0.0334	<0.0219	<0.190	<0.0225	<0.0220	<0.0217	<0.0227	<0.0228	<0.0229	<0.0231	<0.0228	25,000	24	300
2-Chlorotoluene	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<b>0.0425</b>	<b>0.0317</b>	<0.00458	<0.00463	<0.00455	--	--	--
4-Chlorotoluene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	--	--	--
1,2-Dibromo-3-Chloropropane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	--	--	--
1,2-Dibromoethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	0.73	0.028	0.16
Dibromomethane	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	--	--	--
1,2-Dichlorobenzene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	36,000	--	--
1,3-Dichlorobenzene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	--	--	--
1,4-Dichlorobenzene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	64	2.3	13
Dichlorodifluoromethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280 UJ	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	--	--	--
1,1-Dichloroethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<b>0.00106 J</b>	<0.00458	<0.00463	<0.00455	<0.00463	260	1.1	5.9
1,2-Dichloroethane	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	16	0.18	1
1,1-Dichloroethene	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	29,000	54	680
cis-1,2-Dichloroethene	<0.00347	<0.00338	<0.0273	<0.00346	<0.0280	<0.0268	<0.0275	<0.0145	<0.00706	<0.00682	<0.00712	<0.00338	<0.0681	<0.00668	<0.00438	<0.0380	<0.00451	<0.00440	<0.00434	<0.00454	<0.00455	<0.00458	<0.00463	<0.00455	2,300	--	--
trans-1,2-Dichloroethene	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	23,000	--	--
1,2-Dichloropropane	<0.00695	<0.00676	<0.0547	<0.00692	<0.0560	<0.0536	<0.0550	<0.0290	<0.0141	<0.0136	<0.0142	<0.00676	<0.136	<0.0134	<0.00875	<0.0760	<0.00902	<0.00880	<0.00868	<0.00909	<0.00910	<0.00915	<0.00925	<0.00911	--	--	--
1,1-Dichloropropene	<0.00347	<0.00338	<0.0273	<0.00346	<0.028																						





**Note:** Base map prepared from USGS 7.5-minute quadrangle of McMinnville, OR, dated 2020 as provided by USGS.gov.



## Site Location Map

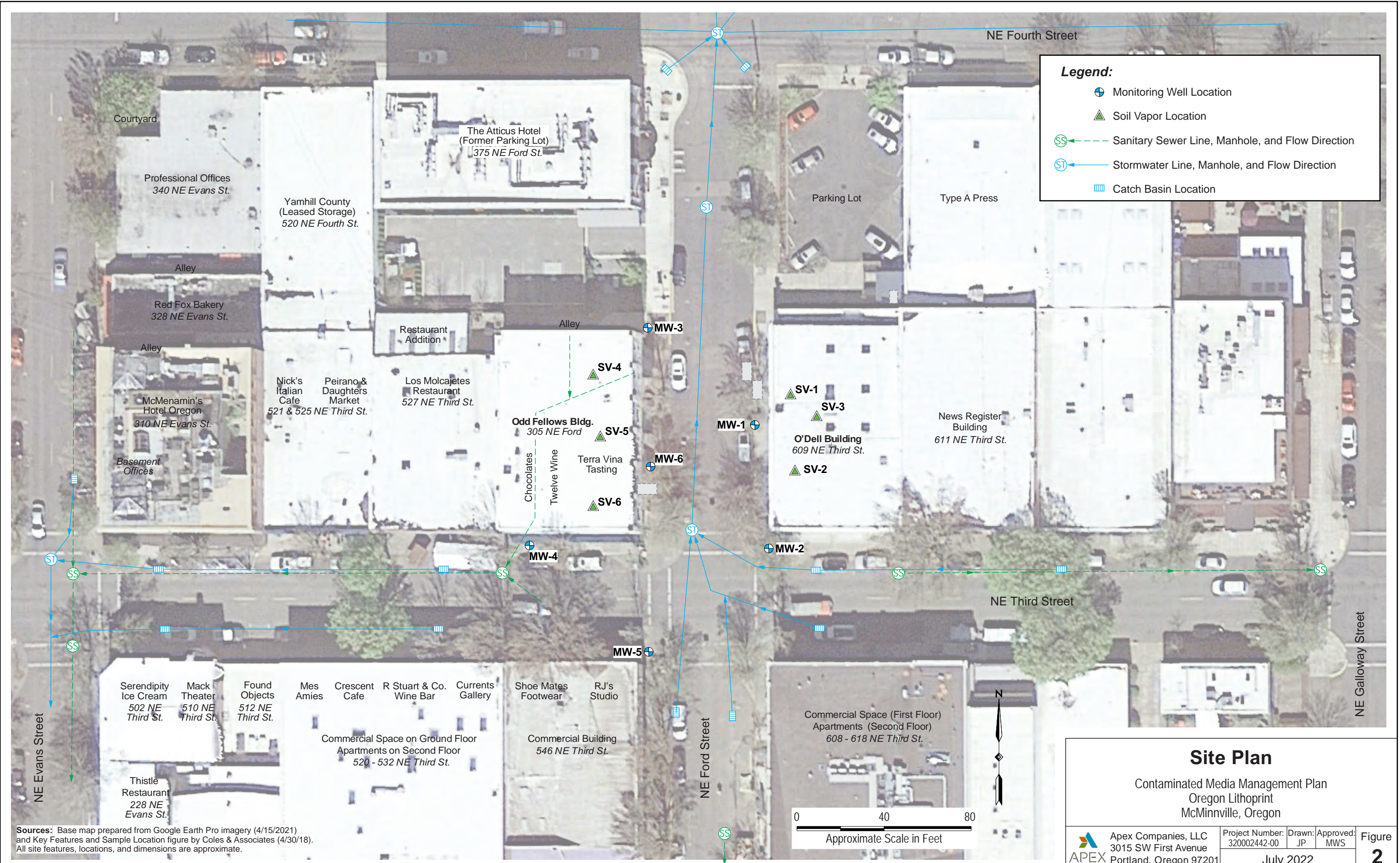
Contaminated Media Management Plan  
Oregon Lithoprint  
McMinnville, Oregon

Apex Companies, LLC  
3015 SW First Avenue  
Portland, Oregon 97201

Project Number: 320002442-00	Drawn: JP	Approved: MWS
July 2022		

Figure  
**1**





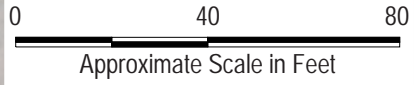
**Legend:**

- Monitoring Well Location
- Soil Vapor Location
- Sanitary Sewer Line, Manhole, and Flow Direction
- Stormwater Line, Manhole, and Flow Direction
- Catch Basin Location

**Site Plan**

Contaminated Media Management Plan  
Oregon Lithoprint  
McMinnville, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number: 320002442-00	Drawn: JP	Approved: MWS	Figure <b>2</b>
	July 2022			

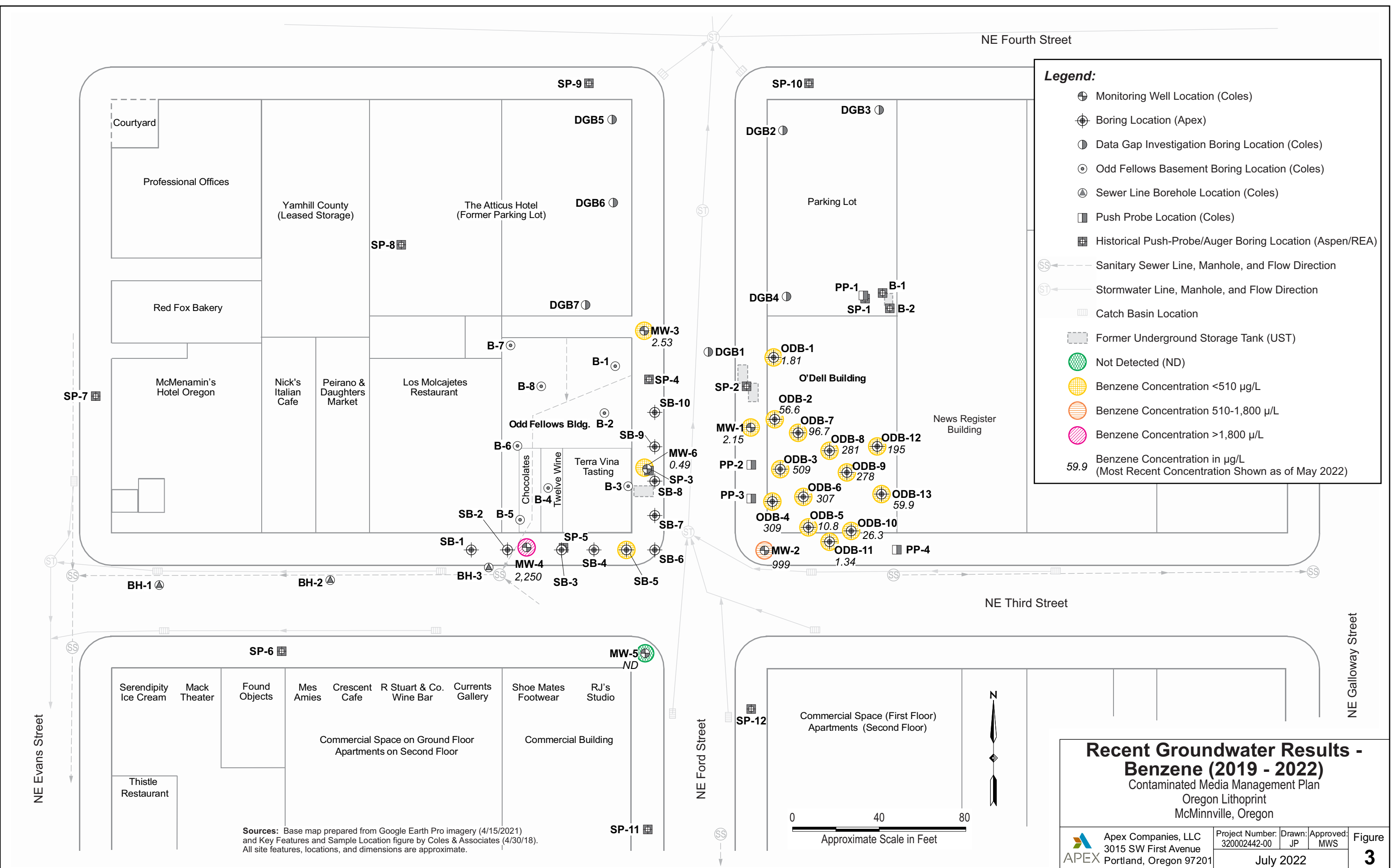


**Sources:** Base map prepared from Google Earth Pro imagery (4/15/2021) and Key Features and Sample Location figure by Coles & Associates (4/30/18). All site features, locations, and dimensions are approximate.

I:\Client\Oregon Lithoprint\2022 CMMP\320002442-00 C2 (Site Plan).des



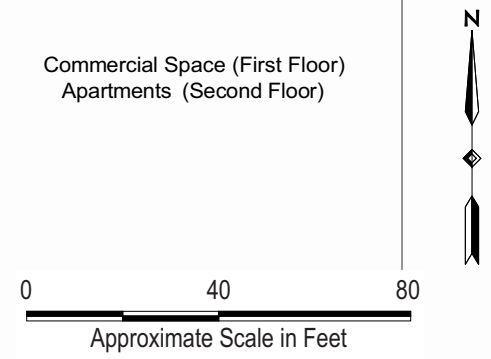
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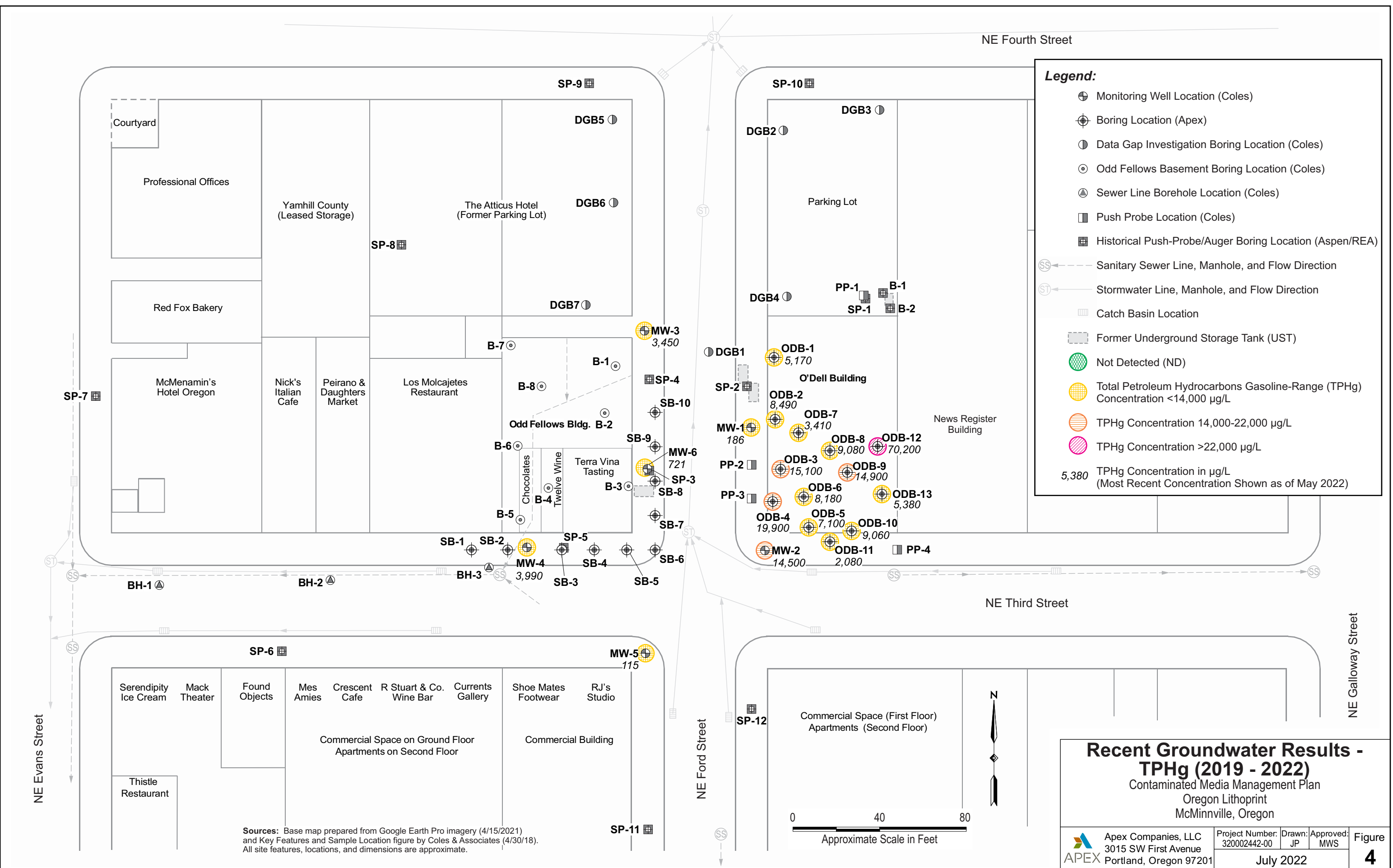
**Sources:** Base map prepared from Google Earth Pro imagery (4/15/2021) and Key Features and Sample Location figure by Coles & Associates (4/30/18). All site features, locations, and dimensions are approximate.

**Recent Groundwater Results - Benzene (2019 - 2022)**  
 Contaminated Media Management Plan  
 Oregon Lithoprint  
 McMinnville, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number: 320002442-00	Drawn: JP	Approved: MWS	Figure <b>3</b>
	July 2022			



I:\Client\Oregon Lithoprint\2022 CMMP\320002442-00 C4 (GW Results - TPHg).des



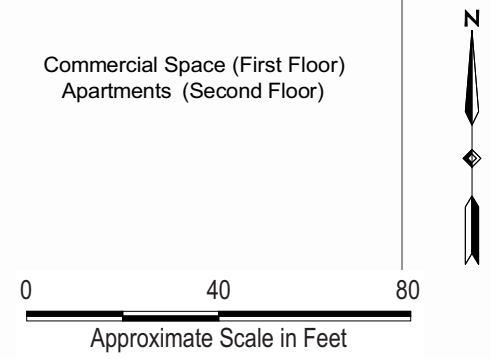
**Legend:**

- ⊕ Monitoring Well Location (Coles)
- ⊕ Boring Location (Apex)
- ⊕ Data Gap Investigation Boring Location (Coles)
- ⊕ Odd Fellows Basement Boring Location (Coles)
- ⊕ Sewer Line Borehole Location (Coles)
- ⊕ Push Probe Location (Coles)
- ⊕ Historical Push-Probe/Auger Boring Location (Aspen/REA)
- SS Sanitary Sewer Line, Manhole, and Flow Direction
- ST Stormwater Line, Manhole, and Flow Direction
- ▣ Catch Basin Location
- ▣ Former Underground Storage Tank (UST)
- ⊕ Not Detected (ND)
- ⊕ Total Petroleum Hydrocarbons Gasoline-Range (TPHg) Concentration <14,000 µg/L
- ⊕ TPHg Concentration 14,000-22,000 µg/L
- ⊕ TPHg Concentration >22,000 µg/L
- 5,380 TPHg Concentration in µg/L (Most Recent Concentration Shown as of May 2022)

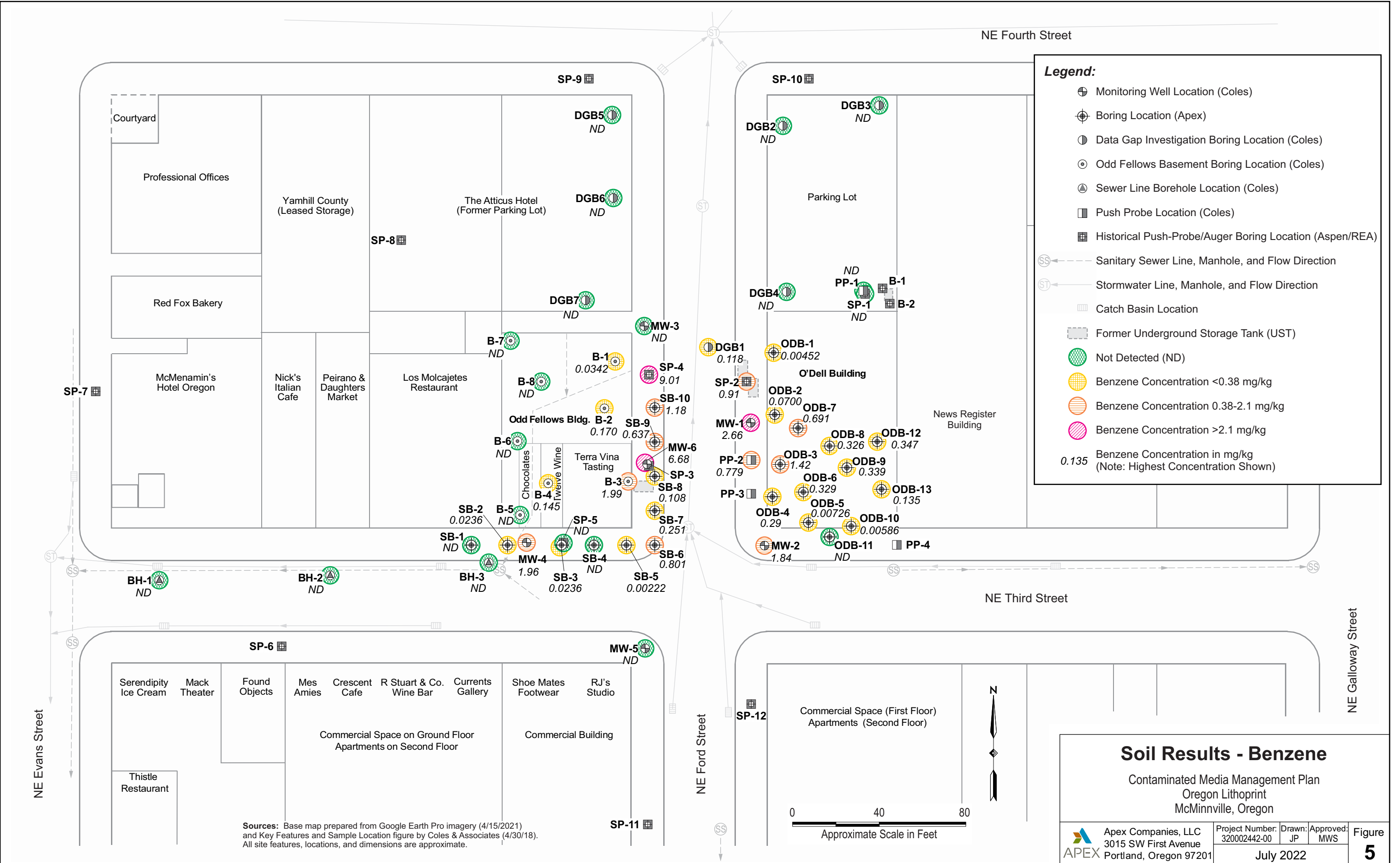
**Recent Groundwater Results - TPHg (2019 - 2022)**  
 Contaminated Media Management Plan  
 Oregon Lithoprint  
 McMinnville, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number: 320002442-00	Drawn: JP	Approved: MWS	Figure <b>4</b>
	July 2022			

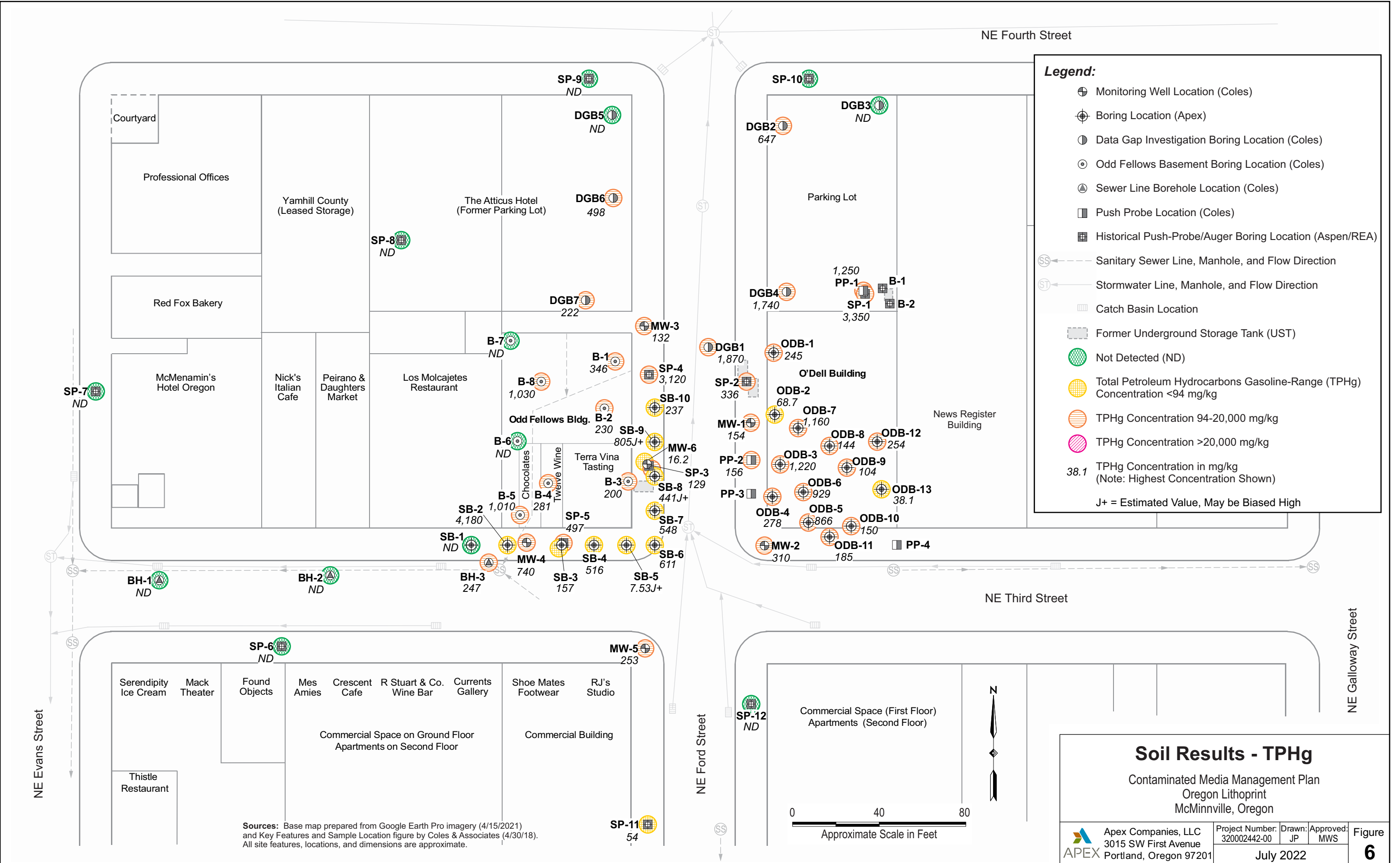
**Sources:** Base map prepared from Google Earth Pro imagery (4/15/2021) and Key Features and Sample Location figure by Coles & Associates (4/30/18). All site features, locations, and dimensions are approximate.



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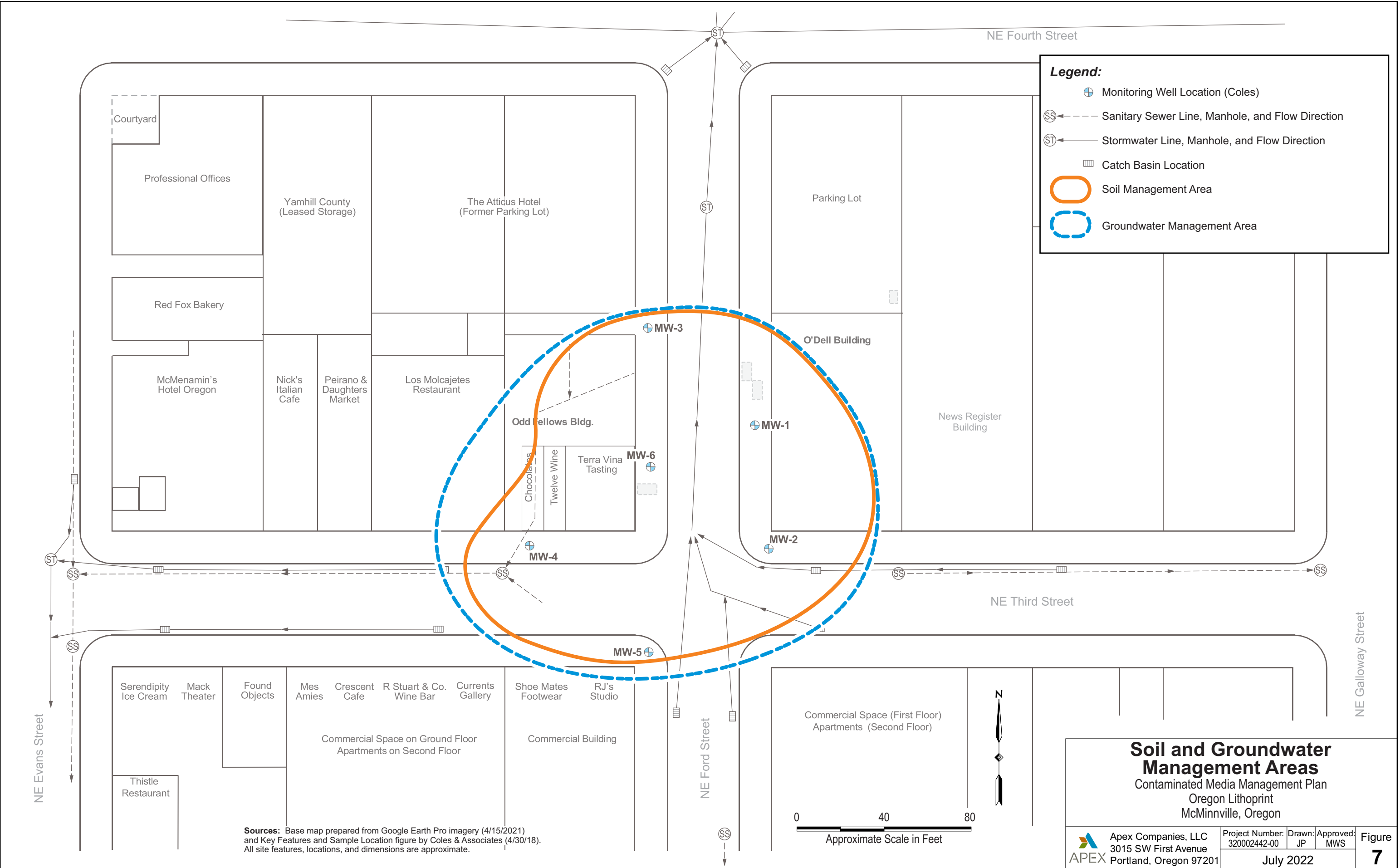
I:\Client\Oregon Lithoprint\2022 CMMP\320002442-00 C6 (Soil Results - TPHg).des



**Soil Results - TPHg**  
 Contaminated Media Management Plan  
 Oregon Lithoprint  
 McMinnville, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number: 320002442-00	Drawn: JP	Approved: MWS	Figure <b>6</b>
	July 2022			

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**Legend:**

- Monitoring Well Location (Coles)
- Sanitary Sewer Line, Manhole, and Flow Direction
- Stormwater Line, Manhole, and Flow Direction
- Catch Basin Location
- Soil Management Area
- Groundwater Management Area

**Sources:** Base map prepared from Google Earth Pro imagery (4/15/2021) and Key Features and Sample Location figure by Coles & Associates (4/30/18). All site features, locations, and dimensions are approximate.

**Soil and Groundwater Management Areas**  
 Contaminated Media Management Plan  
 Oregon Lithoprint  
 McMinnville, Oregon

Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number: 320002442-00	Drawn: JP	Approved: MWS	<b>Figure</b> <b>7</b>
	July 2022			