CONTAMINATED MEDIA MANAGEMENT PLAN

point source solutions, llc

FORMER ALLYN'S CLEANING & DYEING SITE
1006 SE GRAND AVE ET AL.
PORTLAND, MULTNOMAH COUNTY, OREGON
ECSI #6199

Report Prepared for and Reliance Provided to:

ARCOA PARTNERS LLC (AND/OR ITS SUCCESSORS)
301 N 5th Street
Tacoma, Washington 98403

Point Source Solutions Project No: OR190517-3
April 25, 2023 (May 24, 2023 Revision)

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1.0 INTRODUCTION

This Contaminated Media Management Plan (CMMP) has been prepared by Point Source Solutions (Point Source) for the Former Allyn's Cleaning & Dyeing site located at 1006 SE Grand Ave, 1024 SE Grand Ave, and 521 SE Taylor St, Portland, Oregon 97214 (Site). This CMMP is intended to assist the construction team in field identification and management of contaminated media (soil, fill material, groundwater) that could be encountered during site demolition/excavation work during site redevelopment.

This CMMP includes field protocol for identification, response actions, communications, removal, temporary storage or stockpiling, transportation, and treatment and/or disposal of contaminated media. Decisions pertaining to the identification and management of contaminated media will be made by the project environmental representative, property developer/owner and the Oregon Department of Environmental Quality (ODEQ).

A Site Location Map is included as **Figure 1**, a Topographic Map is included as **Figure 2**, and a Site Plan is included as **Figure 3**.

2.0 PROJECT SITE DESCRIPTION

The Site addresses are currently 1006 SE Grand Ave, 1024 SE Grand Ave, and 521 SE Taylor St, Portland, Oregon. The Site includes Multnomah County tax lots 1S1E02BC1300 (addressed as 1006 SE Grand Ave, 0.44 acres), 12001S1E02BC1100 (521 SE Taylor St, 0.23 acres), 1S1E02BC1200 (1024 SE Grand Ave, 0.21 acres), all lots totaling 0.88 acres. The Site is zoned EX-Central Employment and IG1 by the City of Portland. Site improvements include an asphalt-paved parking lot, a low-rise office building, convenience store, and auto repair shop.

3.0 PLANNED REDEVELOPMENT

Site redevelopment is not currently planned at this time. This CMMP has been prepared to assist contractors if removal of soil that does not qualify as clean fill is required during any redevelopment activities in the future.

4.0 PROJECT SITE CHARACTERIZATION

The purpose of this section is to provide information pertaining to environmental conditions associated with the project site.

4.1 BIBLIOGRAPHY

Information pertaining to environmental investigations in this section are based on several previous reports by others and recent investigation activities completed by Point Source. Previous environmental reports reviewed during the preparation of this CMMP are summarized as follows:

- *Subsurface Environmental Site Assessment by Chugwater on behalf of Mr. Vince Huffstutter (Project CW130201.1 dated March 12, 2013);*
- *Phase II Environmental Site Assessment by Point Source on behalf of Caldwell Properties LLC (Project #OR160930-4A, dated January 24, 2017);*
- *Risk Based Corrective Action Determination by Point Source on behalf of Caldwell Properties LLC (Project #OR160930-4B, dated May 22, 2017);*

- *Additional Investigation Data by Point Source (Project #OR161202-3D, dated September 11, 2018);*
- *May 2020 Project Update and Work Plan by Point Source (Project #OR190517-3, dated May 13, 2020);*
- *Site-Specific Risk-Based Corrective Action Determination by Point Source on behalf of Arcoa Partners LLC (Project #OR190517-3, dated February 18, 2021)*

Pertinent information relating to soil and groundwater conditions contained in these reports is summarized in the following sections.

4.2 SITE DEVELOPMENT HISTORY

The Site was occupied by Allyn's Cleaning and Dyeing from 1935 to 1960. Sanborn Fire Insurance Maps dated 1924 and 1950 indicate that the dry cleaning room was located near the southeast corner of the current Site main building. Based on the Sanborn Maps, the dry cleaning area was replaced by the current drive and parking lot by 1969.

4.3 SUBSURFACE CONDITIONS

4.3.1 Soil

Soil borings were advanced by Chugwater from December 2012 to February 2013. During the investigation, borings were advanced by Chugwater as follows:

- Soil borings SB1, SB2, SB7, and SB8 were advanced to depths of up 17.0 feet below ground surface (bgs) in an east to west transect originating from the former dry cleaner location at the SE corner of the Site building. **Staining and odor indicative of soil contamination was observed from approximately 6.5 feet bgs to 16.0 ft bgs.** Soil samples were collected at select intervals within each boring. Soil samples were analyzed for TPH-Dx, VOCs, and RCRA 8 Metals at ESN Northwest in Olympia, Washington. SB8 was analyzed for TPH-Dx, TPH-GX (Stoddard Solvent), and VOCs. Groundwater was not observed.

- Soil borings SB3 through SB6 were advanced in the eastern parking lot of the Site to depths of up to 15.0 feet bgs. No evidence of soil contamination was observed. Soil samples were collected at select intervals within each boring. Soil samples were analyzed for TPH-Dx, VOCs, and RCRA 8 Metals at ESN Northwest. Groundwater was not observed.

From January 2017 through March 2017, Point Source performed a subsurface investigation at the south adjoining 7-Eleven (1024 SE Grand Ave) and Japanese Auto Repair (521 SE Taylor St) properties.

- Borings SB15 and SB17 were advanced in the 7-Eleven parking lot. Borings were advanced to a depth of 12.0 feet bgs. Soil was screened continuously, and no olfactory or visual indication of petroleum hydrocarbon contamination was noted in samples collected from these borings. Field screening with a photoionization detector (PID) did not indicate VOC readings above background levels for the area. Samples were analyzed for TPH-Dx, TPH-Gx, and VOCs at Wy'East Environmental Sciences in Portland, Oregon.

- SB16 was advanced in the northeast corner of the storeroom located in the east half of the 7-Eleven building. This boring was advanced to hard refusal on a tight confining layer located at 16.5 feet bgs. **Stained soil with a solvent odor was observed from 9.0 feet to 16.0 feet bgs. Field screening with a PID indicated VOC readings as high as 1,192 parts per million (ppm). Soil staining abruptly terminated at the**

confining layer encountered slightly above the refusal depth. Unstained soil from 16.0 to 16.5 feet bgs retained a slight odor of solvents. No groundwater was encountered in this boring. The sample was analyzed for TPH-Dx, TPH-Gx, and VOCs at Wy'East Environmental Sciences.

- SB18 was advanced in the storeroom approximately 15 feet south of SB16. This boring was advanced to refusal on a tight confining layer located at 17.0 feet bgs. **Soil with a light solvent odor was observed starting at 9.0 feet bgs. Soil staining was observed in a narrow band from 9.5 to 10.0 feet bgs. No staining was observed from 11.0 to 14.0 feet bgs, however soils within this interval retained a light solvent odor. Stained soils with a heavy odor of solvents were observed again starting at 13.0 feet bgs, and continued to the refusal depth of 17.0 feet bgs. Contamination at refusal appeared moderate when compared to earlier runs. Field screening with a PID indicated VOC readings as high as 1,508 ppm**. No groundwater was encountered in this boring. The sample was analyzed for TPH-Dx, TPH-Gx, and VOCs at Wy'East Environmental Sciences.

- Boring SB19 was completed to hard refusal at 17.5 feet bgs in the southeast corner of the 7-Eleven storeroom, approximately 12 feet south of SB18. Native soil consisting of clayey silt, sandy silt, silt, and fine sand was encountered in the boring. Coarse sand and gravel was noted at the refusal depth of 17.5 feet. Soil samples were collected at depths of 10.0 feet bgs and 17.5 feet bgs at this location. Groundwater was not encountered in this boring. **Indications of light to moderate contamination were noted in bands at several depths between 9.0 and 16.0 feet bgs in the continuous soil cores collected from this boring**. The samples were analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB20 was completed to progress refusal at 18.0 feet bgs in the northwest corner of the 7- Eleven storeroom against the wall separating the store room from the sales floor. Native soil consisting of clayey silt and silt was encountered in the boring. Soil samples were collected at depths of 10.0 feet bgs and 18.0 feet bgs at this location. Groundwater was not encountered in this boring. **Indications of heavy contamination were noted between 9.0 and 16.0 feet bgs in the continuous soil cores collected from this boring**. **Field screening of soils between 16.0 and 18.0 feet bgs indicated a light odor of contamination and no staining.** The samples were analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB21 was completed to 16.0 feet bgs outside the 7-Eleven building in the parking lot. Shallow soils consisted of urban fill, including asphalt, pulverized brick, and mortar. Native soils consisted of clayey silt. A soil sample was collected from a depth of 16.0 feet at this location. Groundwater was not encountered at this boring. **No indications of contamination were noted in the continuous soil cores collected from this boring.** The sample was analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB22 was completed to hard refusal at 13.8 feet bgs in the Japanese Auto Repair building (east adjacent to the 7-Eleven property). Native soil consisting of silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.8 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 12.2 and 13.8 feet bgs in the continuous soil cores collected from this boring**. The sample was analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB23 was completed to hard refusal at 13.5 feet bgs in the Japanese Auto Repair building, approximately 14 feet northeast of SB22. Native soil consisting of silt, clayey silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.5 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between**

12.0 and 13.5 feet bgs in the continuous soil cores collected from this boring. The sample was analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB24 was completed to hard refusal at 13.7 feet bgs in the northwest corner of the Japanese Auto Repair building. Native soil consisting of silt, clayey silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.5 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 4.5 and 13.7 feet bgs in the continuous soil cores collected from this boring**. The sample was analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB25 was completed to hard refusal at 13.7 feet bgs in the Japanese Auto Repair building, approximately 13 feet east of SB23. Native soil consisting of gravel, silt, silty sand, coarse and medium sand was encountered in the boring. A soil sample was collected at a depth of 14.0 feet bgs at this location. Groundwater not encountered in this boring. **No indications of contamination were noted in the continuous soil cores collected from this boring.** The sample was analyzed for TPH-Gx and VOCs at Apex Laboratories.

An additional investigation was performed in May 2018. Soil and groundwater borings were advanced by Cascade under supervision of Point Source personnel. All soil and groundwater samples were analyzed for TPH-Gx and VOCs at Apex Laboratories.

- Boring SB28 was advanced to progress refusal at 32.0 feet bgs in the southwest corner of the 7-Eleven property. **Impacted soils were observed in this boring at 30.0 feet bgs**. Wet soil was first encountered at 30.0 feet bgs. An attempt was made to collect a groundwater sample, however the temporary monitoring well was dry following over 30 minutes of equilibration time. A soil sample was collected (SB28-S1) at the apparent soil-water interface (30.0 feet bgs) in place of a groundwater sample.

In August 2019, monitoring wells MW1 through MW5 were installed by Cascade under supervision by Point Source Solutions. Soil was screened from the ground surface for the purpose of collecting additional samples for characterization, and for determining the proper screened interval. All samples were analyzed for Extractable and Volatile Petroleum Hydrocarbons (EPH/VPH) at Fremont Analytical in Seattle, Washington, and TPH-Dx, TPH-Gx, and VOCs at Apex Laboratories.

- MW3 was advanced to a depth of 40.0 feet bgs on the east edge of the 7 Eleven property parking lot. **Impacted soils were observed at the SWI** and a soil sample was collected. Groundwater was encountered at 36.0 feet bgs. The monitoring well was installed with a screened interval of 30.0 to 40.0 feet bgs.

- MW4 was advanced to a depth of 40.0 feet bgs on the West property line of the Site. **Impacted soils were observed from 9.5 feet bgs to the SWI.** Soil samples were collected at several intervals based on field indicators, and from the SWI. Groundwater was encountered at 34.0 feet bgs. The monitoring well was installed with a screened interval of 30.0 to 40.0 feet bgs.

- MW5 was advanced to a depth of 35.0 feet bgs in the vicinity of the former dry cleaner location. **Impacted soils were observed from 7.0 feet bgs to the SWI.** Soil samples were collected based on field indicators, and from the SWI. Groundwater was encountered at 34.0 feet bgs. The monitoring well was installed with a screened interval of 30.0 to 40.0 feet bgs.

The impacted soil plume is composed of a main body generally located from 7.0 to 18.0 feet bgs, a hot spot roughly situated on the suspected source from approximately 4.5 feet bgs to the SWI (30 feet bgs), and a

smear zone lens at the SWI. The main body extends from the suspected source into SE Grand Avenue to the West. Lateral dispersion and some down/cross gradient transport has occurred to the south underneath the grand 7-Eleven building, and it is assumed that symmetrical dispersion occurred to the north under the Arcoa building. The SWI smear zone covers an area bound predominantly by SWI soil samples collected during MW installation and appears to be consistent with the local direction of groundwater flow.

Based on current information, these soils are suitable for disposal as non-hazardous waste at a RCRA Subtitle D Landfill (such as the Waste Management Hillsboro Landfill). Soils that exhibit staining and odor that is indicative of petroleum contamination should be considered as exceeding ODEQ Clean Fill Screening Levels (CFSLs) unless soil testing indicates otherwise.

4.3.2 Groundwater

The highest concentrations of TPH-Gx in groundwater were historically detected near the suspected source of the release. In 2013, 2,200 ug/L was detected in sample SB2B-W1 (Chugwater), and 1,460 was detected in W26 (located approximately 15ft NE of SB2B) in 2018.

The concentrations of TPH-Gx at the Site have never exceeded the Site-Specific RBC for GW in an excavation for construction worker receptors (11,000 ug/L). Site-Specific calculations of TPH-Gx as Stoddard Solvent were conducted with DEQ supervision, and are included with the VCP report for the Site.

If groundwater is encountered during site redevelopment activities, further testing confirming that the water is suitable for discharge into a municipal and/or site-specific stormwater drainage feature will be required. A batch discharge permit for groundwater encountered may be obtained through the City of Portland, which will necessitate further characterization of media prior to approval.

5.0 ODEQ CLEAN FILL SCREENING LEVELS

There are currently no ODEQ regulations requiring pre-transport testing of soil that is reasonably expected to be clean. However, ODEQ has published an internal management directive (*Clean Fill Determinations*, dated July 23, 2014), which includes Clean Fill Screening Levels (CFSLs) to use as guidance when evaluating disposal options for soil with low levels of contamination. Soil that does not appear contaminated and contains contamination at levels less than the ODEQ CFSLs can generally be re-used on site or disposed of off-site without restrictions. Excavation spoils will not meet DEQ's definition of "clean fill" if field screening evidence of contamination is observed or other chemical constituents are found to be present though additional characterization during construction.

Visual and olfactory (staining and odor) observations, field screening instrument readings (photoionization detector), and sheen testing are all methods that can be used to assist in identification of petroleum impacted soils.

6.0 CONTAMINATED MEDIA MANAGEMENT PLAN

The goals of this CMMP are to (1) provide the excavation contractor with information on the preliminary spatial distribution of impacted soil at the Site, (2) establish a decision structure to assist the earthwork contractor in the detection and management of impacted soil during excavation activities, and (3) prevent the exacerbation of environmental conditions.

6.1 IDENTIFICATION AND MANAGEMENT OF CONTAMINATED SOIL

Soil impacted with TPH-Gx and VOCs exhibits distinct field screening characteristics, including staining, odor, and

sheen when grains of soil are placed in a small amount of water. Soil management will rely on analytical results provided in **Figures 4A and 4B.**

6.2 SOIL MANAGEMENT METHOD #1: OFF-SITE TRANSPORT AND DISPOSAL

Based on known subsurface conditions at the project site (Section 4.3), contractors should assume that soil from 4.5 feet bgs to the soil-water interface at 30 feet bgs in the vicinity of borings specified in Section 4.3 during construction will not qualify as clean fill, unless the results of soil testing indicate otherwise.

Soil generated during development of the Site is expected to be suitable for disposal as non-hazardous waste at a RCRA Subtitle D Landfill or an ODEQ-approved disposal facility.

Where soil needs to be disposed of at an off-site facility, the excavation contractor will need to obtain a permit from the disposal facility prior to hauling the impacted soil to their facility. The earthwork contractor will likely need to provide chemical analytical laboratory data to the selected disposal facility.

Copies of the permit should accompany each load transported to the selected disposal facility.

Disposal facilities often have the following requirements prior to accepting material at their facility:

- No material will be received without a completed contaminated soil profile and application form (to be completed by the earthwork contractor), an approval of credit application on file and pre-approval from the disposal facility.
- Trucks will be permitted to weigh in as negotiated with the facility.
- Material may be sampled upon delivery by the disposal facility. Comparisons may be made between the submitted profile and on-site analysis. Soil transported to the disposal facility that is not consistent with the soil profile may be rejected.
- Exported soil must not contain any free liquids or foreign material (i.e., rebar, fittings, cans, wood, etc.). Truck loads with excessive foreign material may be reloaded and returned to the contractor or screened, sorted, and disposed of by the disposal facility for an additional fee.

6.3 SOIL MANAGEMENT METHOD #2: ON-SITE RE-USE

Based on our knowledge of the environmental condition of the Site, soil generated during earthwork at the Site can be re-used on site without additional testing requirements, assuming (1) it is geotechnically suitable, (2) does not exceed its ODEQ Soil Ingestion, Inhalation, and Dermal Contact RBC for Urban Residential Receptors and (3) is ultimately capped with either a structure, pavement, or an approved geotextile.

6.3.1 Stockpile Management

If potentially contaminated soil is encountered within the project site that cannot be immediately transported off site for disposal, it must be temporarily stockpiled in areas designated by a qualified firm. Soil that is placed in temporary stockpiles within the project site must be well maintained at all times. All stockpiled soil must be placed on impermeable plastic sheeting (minimum 6-mil thick) with a berm around the perimeter of the stockpile. The plastic sheeting and berm prevent the runoff of stockpiled soil contaminants to surrounding areas. The berm may be constructed with hay bales or other equivalent methods approved by a qualified firm. The bottom plastic sheeting should be lapped over the berm materials, and the soil stockpile within the berm should also be covered with plastic sheeting to prevent erosion or leaching of contaminants from the soil

stockpile impacting the underlying soil. The upper plastic sheeting covering the soil stockpile should be secured using sand bags or an equivalent. The upper plastic sheeting prevents the stockpiled soil from being exposed to precipitation and wind.

The contractor is responsible for restoration of all stockpiled areas to a pre-stockpile condition, which means all soil and debris should be removed from the area. Stockpile plastic debris is not to remain on the project site or any adjacent sites following stockpile soil removal. If stockpiled soil is removed for off-site disposal, completion of removal must be satisfactory to the developer/owner and Point Source.

6.3.2 Composite Soil Sampling

Potentially contaminated stockpiled soil will be sampled using composite soil sampling methods professionaland analyzed for disposal profiling.

STOCKPILE SOIL SAMPLING FREQUENCY	
Stockpile Volume Cubic Yards	**Number of Composite Soil Samples to Collect**
0 - 10	1
11 - 50	2
51 - 100	3
101 - 500	4
Each composite soil sample will be comprised of three soil sub-samples collected from a particular area of the soil stockpile. Soil stockpiles greater than 1,000 cubic yards will be sampled at a rate of five composite soil samples for the first 500 cubic yards, plus one composite soil sample for each additional 500 cubic yards.	

Stockpile soil samples will be collected by hand or the use of hand tools. Decontaminated hand tools should be used to remove the surface layer of soil and then the soil sample will be retrieved with a decontaminated stainless steel scoop or disposable gloves. Chrome-plated tools will not be used.

Soil samples will be collected using the procedure outlined below. Disposable gloves will be worn and changed between samples.

- Remove the top layer of soil to the desired sampling depth using a decontaminated hand tool.
- Conduct an initial visual screen (based on discoloration and sheen) to help identify the most appropriate sampling location.
- Mix the discrete soil samples into one composite soil sample in a decontaminated stainless steel bowl or disposable plastic bag until thoroughly homogenized.
- Transfer the composite soil sample to a labeled, laboratory-prepared sample jar using a decontaminated stainless steel or plastic laboratory spoon. Fill the jar(s) completely to minimize headspace.
- Clean the jar rim(s) before tightening the lids, and quickly and adequately seal the sample containers.
- Collect a sufficient volume of soil sample for the particular analysis. Place the labeled soil sample jar(s) in an iced cooler for temporary storage. Transport the soil samples to the chemical analytical laboratory.
- Use a field notebook to record a description of the soil that was sampled, the location of soil sample, the

sample I.D., and the time of soil sample collection. Record the sample on the soil sampling field forms and chain-of-custody form. The stockpile soil sample I.D. will include a prefix identifying the stockpile (SP) number followed by a sequential numeric designation. For example, the third composite soil sample collected from stockpile SP-3 will be identified as "SP3-3".

- Decontaminate the equipment between the collection of soil samples. Decontamination will include: (1) rinse with tap water and scrub with a scrub brush until free of large particles, (2) wash with phosphate-free detergent solution, (3) rinse with tap water and (4) rinse with distilled water.

Soil stockpile composite samples will be submitted to an analytical laboratory for analysis of the following (as required by the receiving disposal facility):

- Petroleum Hydrocarbons by NWTPH-GX and NWTPH-DX
- Volatile Organic Compounds by EPA Method 8260

The chemical analytical results shall be used to evaluate the appropriate off-site disposal location. All soil designated for off-site disposal must be characterized and permitted in accordance with the receiving facility's requirements prior to transport and disposal.

6.4 EROSION AND DUST CONTROL

If concrete slabs and asphalt paving have been removed from the Site, the exposed soil will become susceptible to erosion by wind and water; therefore, erosion control measures should be planned carefully and be in place before construction begins that removes concrete and/or asphalt. Silt fences, hay bales, and/or granular haul roads will be used as required to reduce sediment transport during construction to acceptable levels.

Measures to reduce erosion should be implemented in accordance with OAR 340-41-006, OAR 340-41-455, and the City of Portland and Multnomah County regulations regarding erosion control. In general, erosion control measures must limit sediment transport to less than 1 ton per acre per year, as calculated by the Universal Soil Loss equation.

6.5 CULTURAL RESOURCES

The areas of planned excavations are not expected to contain cultural or archaeological artifacts. However, if cultural or archaeological resources are inadvertently discovered during excavation, work in the area must stop and the Legislative Commission on Indian Services shall be notified by calling 503.986.1067. The Oregon State Historic Preservation Office should be contacted regarding discovery or potential damage to archaeological sites. ODEQ should also be contacted so that modifications to the work scope may be discussed.

6.6 CONTRACTOR REPORTING REQUIREMENTS

The contractor is responsible for keeping a detailed daily record of all soil excavation, stockpiling, export, and disposal of potentially contaminated soil. This includes the purpose, origin, destination, and volume of soil that is (1) loaded and hauled to the approved off-site disposal sites, (2) re-used as fill on the project site, or (3) transported to temporary stockpile locations (within the project site). The contractor is responsible for preparing a daily field report for distribution to the owner that identifies the number of truck-loads of soil transported off site and daily tonnage for each disposal location. All soil excavation, handling, and disposal activities will be documented in these daily field reports by the contractor, and soil sampling and analysis by a qualified firm will be summarized in a final report. The daily reports should also contain documentation of any dewatering systems as described in Section 4.3.2.

6.7 GROUNDWATER MANAGEMENT

Groundwater has been noted to be encountered at depths between 26 and 34 feet bgs in the vicinity of the Site. It is unknown whether groundwater will be encountered during future excavation activities. If only a limited volume of groundwater or surface water requires removal during excavation, vacuum trucks can be mobilized to remove and dispose of the accumulated water.

If the quantity of water encountered merits dewatering, the contractor should make arrangements to have the water generated during construction activities pumped to above-ground storage tanks for management. Containerized water will require handling and chemical analytical testing in accordance with applicable regulations. A depiction of the estimated plume of impacted groundwater is included as **Figure 4C**.

If impacted groundwater is identified during construction, contingencies to address unacceptable contaminant levels in the effluent stream will be employed. A typical treatment system could include a series of 20,000-gallon storage tanks equipped with chitosan socks, carbon adsorption filters, sand filters, and/or bag filters to remove sediments and contaminants (if necessary). The excavation contractor is responsible for obtaining the necessary discharge permits; the treatment system setup, maintenance, and modification of the system; effluent testing; discharge metering; and agency reporting.

7.0 IMPORTED BACKFILL CONSIDERATIONS

All fill material imported to the project site shall consist of either a manufactured rock product (e.g., ¾-inch-minus crushed rock from a permitted rock quarry) or must be free of contaminants at concentrations exceeding DEQ's CFSLs. It is the contractor's responsibility to ensure all imported fill material meet these criteria and provide the owner with the imported material origin information and accompanying documentation demonstrating the material meets DEQ CFSLs, if not using a manufactured rock product. If the source facility or contractor cannot provide documentation demonstrating that the material meets DEQ CFSLs, the material should not be used as backfill at the project site. In addition, if evidence of contamination is observed in imported fill material, the contractor should reject the imported backfill and identify an alternate source. Also, material imported as structural backfill should be evaluated and approved by the geotechnical engineer before placement on the site.

8.0 UNFORESEEN CONDITIONS

In the event that undocumented contamination or other potentially hazardous conditions are encountered that are not addressed in this CMMP, the earthwork contractor shall cease work and notify the owner and the qualified environmental contractor. The earthwork contractor will then barricade or otherwise isolate the area and avoid filling the area until authorized to do so by the qualified environmental contractor. The qualified firm will determine the appropriate course of action to assess potential unknown conditions encountered during excavation. The earthwork contractor shall not replace any known or suspected contaminated soil in any excavation area without prior approval by the qualified environmental contractor.

9.0 ASSUMPTIONS AND LIMITATIONS

This CMMP is designed to provide earthwork contractors with guidance for the proper handling and management of impacted soil. This document is intended to be used as a general overview document for the use of the excavation contractor and project development team during the earthwork portions of Site projects.

The prime contractor must prepare and implement during the project a site-specific Health and Safety Plan (HSP). The HSP fulfills "worker right to know" requirements (29 CFR 1926.59). A copy of the HSP must be submitted to the developer/owner prior to the start of work on the Site. During work on the project, the HCP

must be posted at the project site. The prime contractor is responsible for notifying subcontractors of pertinent environmental conditions. Subcontractors may either adopt the prime contractor's HCP or must prepare their own HCP. This document should be used in conjunction with, not in place of, the HCP and the project specifications. Each contractor and subcontractor is responsible for the safety of its employees, including compliance with applicable OSHA regulations, and compliance with all specifications in the technical specifications manual for the project.

In addition to implementation of an HSP, the prime earthwork contractor is responsible for preparation and implementation of a site-specific HSP to ensure adequate protection for their workers while on site.

If you have any questions regarding this CMMP, please do not hesitate to contact the undersigned.

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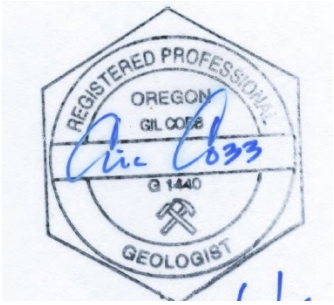

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FIGURES

Figure 1	Site Location Map
Figure 2	Topographic Map
Figure 3	Site Plan
Figure 4A	Soil TPH Sample Location Diagram
Figure 4B	Soil VOCs Sample Location Diagram
Figure 4C	Groundwater TPH Sample Location Diagram

FIGURES

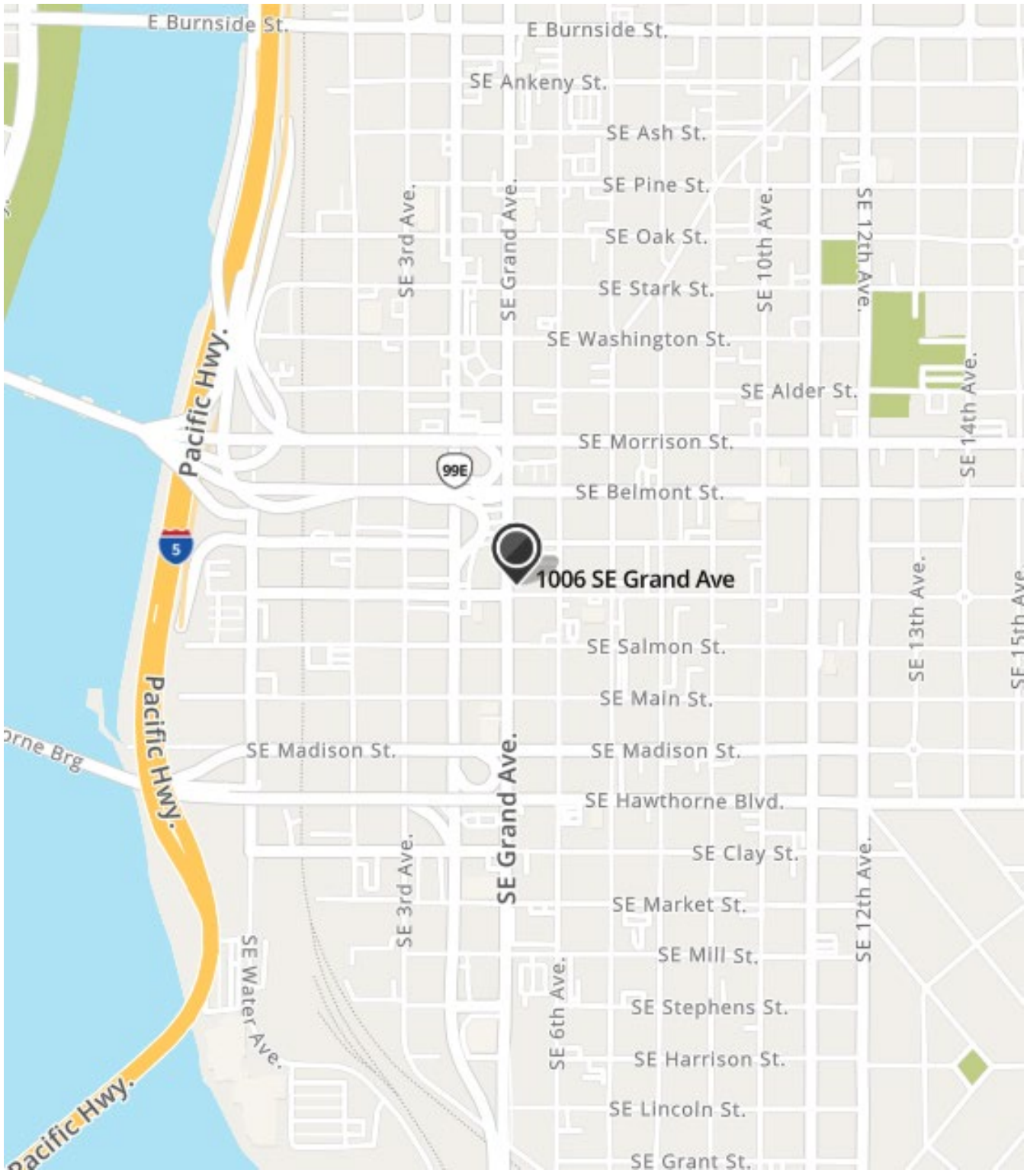

FIGURE 1 - SITE LOCATION MAP	Map from MapQuest N↑
point source solutions, llc ENVIRONMENTAL CONSULTING AND CONTRACTING	**Site Name:** Former Allyn's Cleaning & Dyeing 1006 SE Grand Avenue et al. Portland, OR 97214 **Project Number:** ECSI #6199

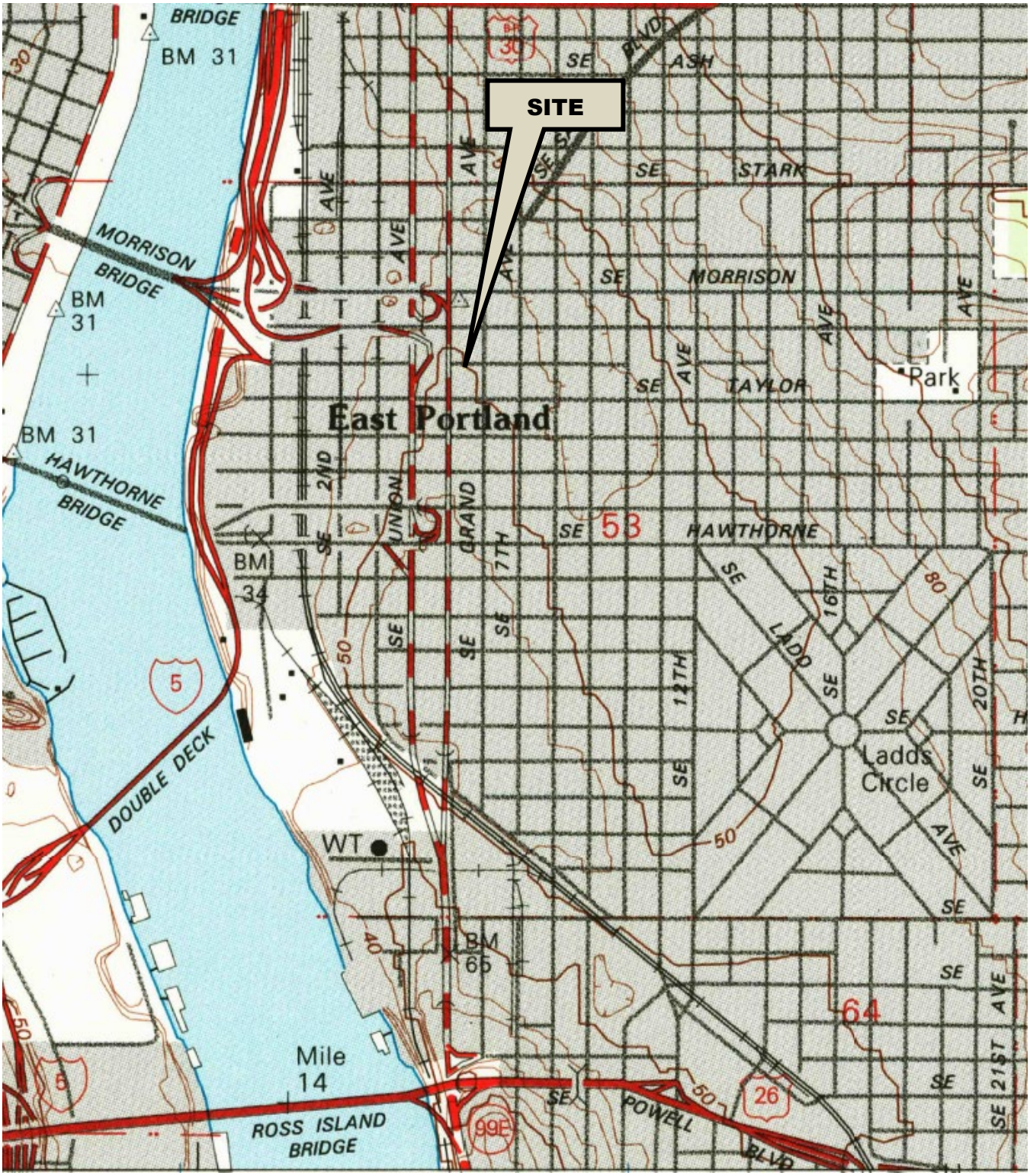

FIGURE 2 - TOPOGRAPHIC MAP

Source: USGS 7.5 Minute Topographic Map
Portland, OR Quadrangle 1984

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Site Name: Former Allyn's Cleaning and Dyeing
1006 SE Grand Avenue et al.
Portland, OR 97214

Project Number: ECSI #6199

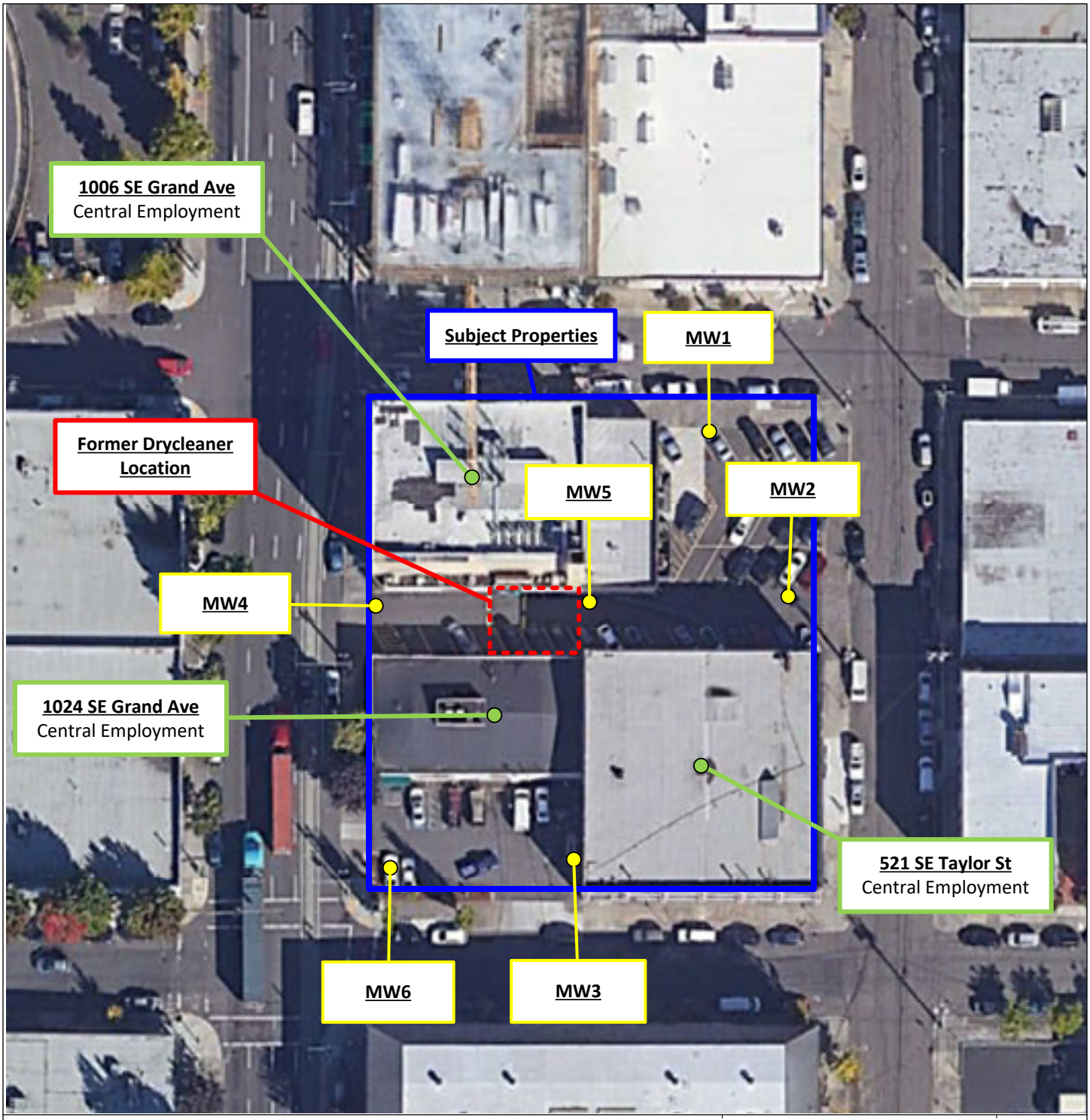

FIGURE 3 - SITE PLAN

Image From Google Earth (2018)

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Notes:

- *Location of former drycleaner based upon historical documentation.*

Adjacent Property

Monitoring Well Location

Site Boundary

Former Drycleaner Location

Scale in Feet (Approximate)

100

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Site Name: Former Allyn's Cleaning & Dyeing
1006 SE Grand Avenue et al.
Portland, OR 97214

Project Number: ECSI #6199

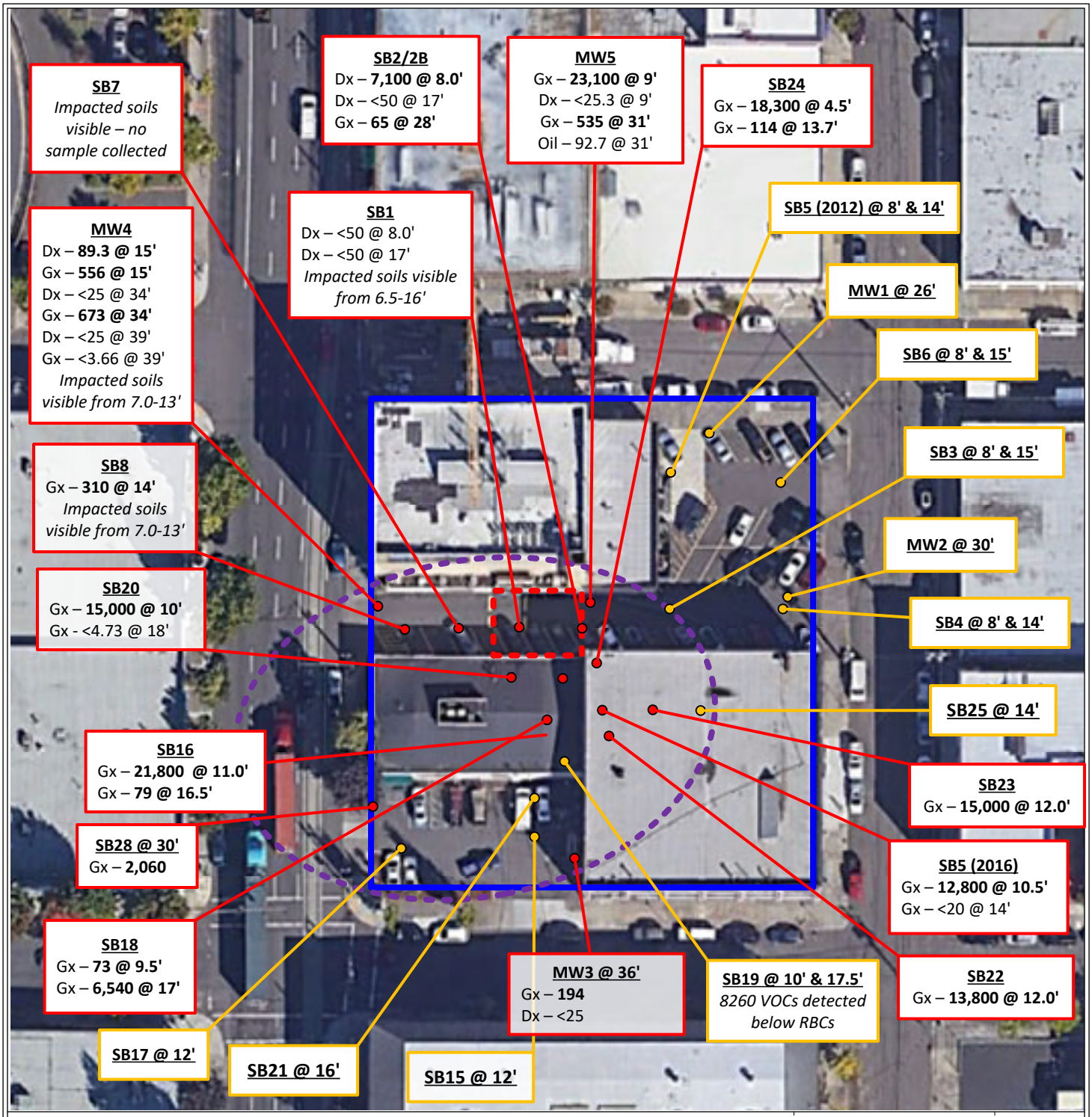

FIGURE 4A – SOIL TPH SAMPLE LOCATION DIAGRAM

Image From Google Earth (2018)

N

Notes:

- *Soil Sample results in mg/Kg*
- *Location of former drycleaner based upon historical documentation.*
- *SB15 – SB28 advanced by PSS (2017-2018)*
- *SB1 – SB8 advanced by Chugwater (2013)*
- *MW1 – MW5 advanced by PSS (2019)*

Soil Sample Location

Soil Sample Location (Stoddard solvent observed/detected)

Site Boundary

Former Drycleaner Location

Estimated Impacted Soil Extent

Scale in Feet (Approximate)

100

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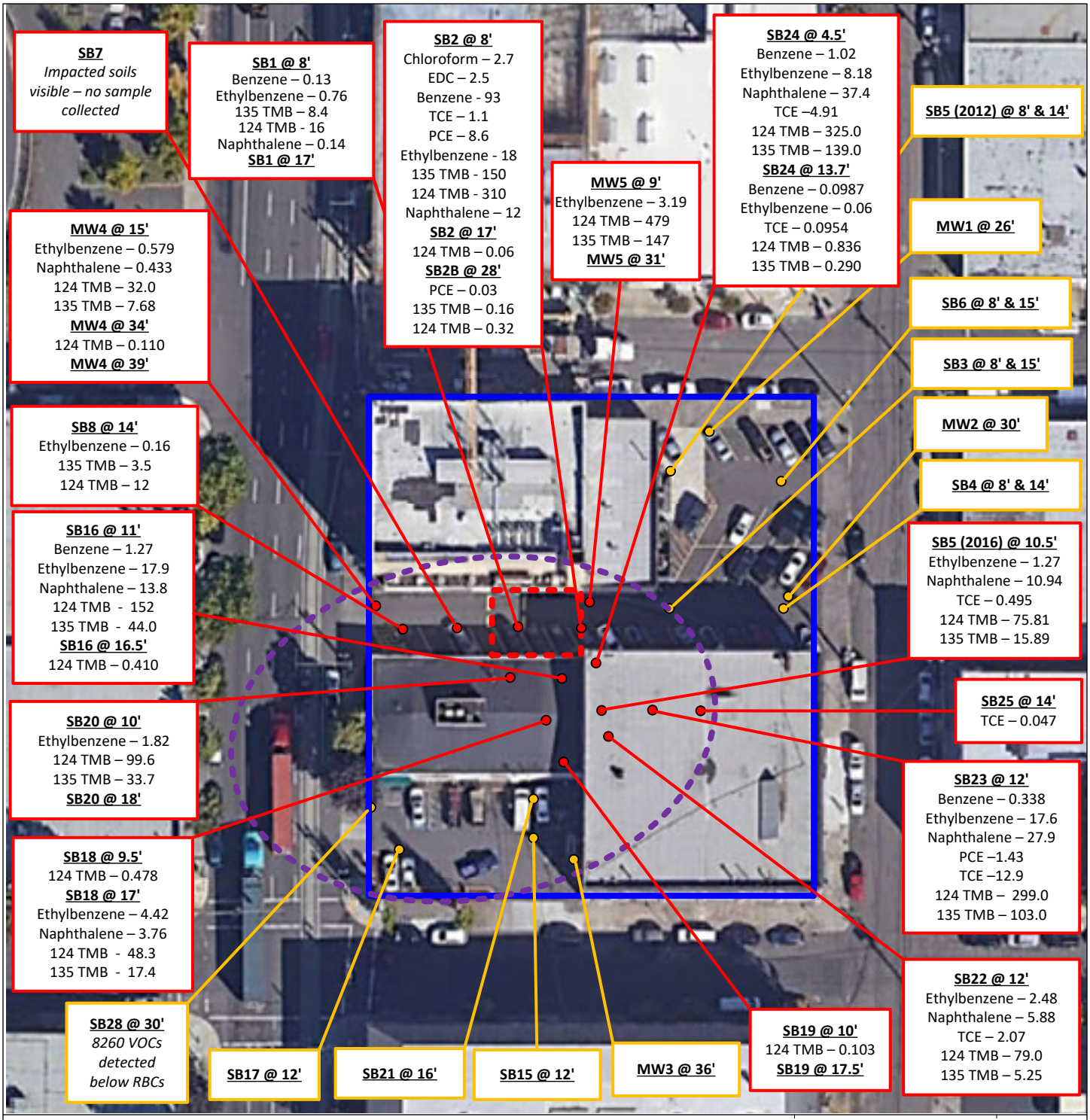

FIGURE 4B - SOIL VOCs SAMPLE LOCATION DIAGRAM

Image From Google Earth (2018)

N

Notes:

- *Soil Sample results in mg/Kg*
- *Location of former drycleaner based upon historical documentation.*
- *SB1 – SB8 advanced by Chugwater (2012-2013)*
- *SB5, SB15 – SB28 advanced by PSS (2016-2018)*
- *MW1 – MW5 advanced by PSS (2019)*

Soil Sample Location

Soil Sample Location (VOCs observed/detected)

Site Boundary

Former Drycleaner Location

Estimated Impacted Soil Extent

Scale in Feet (Approximate)

100

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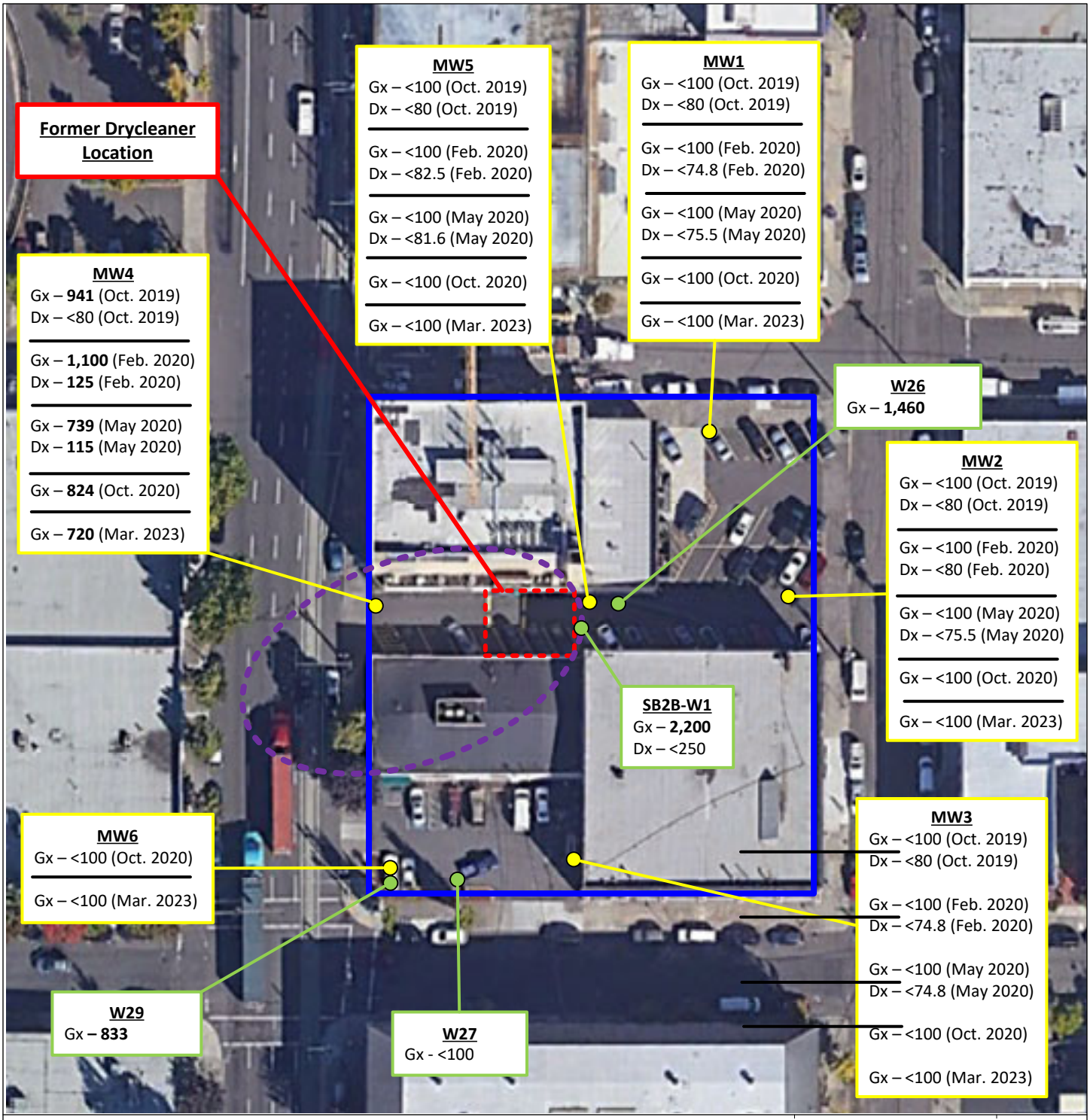

FIGURE 4C - WATER TPH SAMPLE LOCATION DIAGRAM

Image From Google Earth (2018)

N

Notes:

- *Water Sample results in ug/L*
- *Results depicted for TPH-Dx/Gx (stoddard solvent) only*
- *Estimate GW TPH plume based upon Oct 2020 GWM event*
- *SB2B-W1 collected by Chugwater (2013)*
- *W26 – W29 collected by PSS (2018)*
- *MW1 – MW6 installed by PSS (2019-2020)*

Water Sample Location

Monitoring Well Location

Site Boundary

Former Drycleaner Location

Scale in Feet (Approximate)

100

Estimated TPH Impacted GW Extent

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