State of Oregon
Department of Environmental Quality Memorandum

Date: February 9, 2026

To: FILE

Through: Brad Shultz and Don Hanson

From: Sarah Kingery
Western Region

Subject: Springfield Cardlock, LUST 20-16-1601; Staff Memorandum in support of a No Further Action determination

This document presents the basis for the Oregon Department of Environmental Quality's (DEQ's) recommended No Further Action (NFA) determination for the Springfield Cardlock, in Springfield. As discussed in this report, contaminant concentrations in soil and groundwater are below acceptable risk levels.

The proposed NFA determination meets the requirements of Oregon Administrative Rules Chapter 340, Division 122, Sections 0205 to 360 and ORS 465.200 through 465.455.

The proposal is based on information documented in the administrative record for this site. A list of key documents used is included at the end of this report.

1. BACKGROUND

Site location.
The site's location can be described as follows:
- Address: 1616 30th Street, Springfield, Lane County, Oregon.
- Latitude 44.0596 North, longitude -122.9827 West
- Tax lot 1935, Township 17 South, Range 02 West, Section 30

Site setting.
The site is 2.19 acres in size. It is flat, with approximately 2/3 of the site paved and 1/3 in undeveloped land. The paved portion of the site is developed with three underground storage tanks (USTs) consisting of two 12,000-gallon gasoline USTs and one 20,000-gallon diesel UST. There is a canopy over fuel islands and a building.

The site is in an area zoned heavy industrial (HI); however, properties in the area are vacant or have buildings more typical of light industrial. The property is bordered by a rail line to the north. 30th Street runs along the east side and Olympic along the south side of the property. An electrical substation is adjacent to the west side of the site. The HI zoning does not allow residential use.

Physical setting.
The Site is flat and at an elevation of approximately 474 feet above sea level. Based on subsurface investigations at the Site, soils consist primarily of silt, clayey silt, sandy silt, silty sand, and sand with varying quantities of gravel from the ground surface to approximately 15 feet below ground surface (bgs). This is consistent with regional geology.

Depth to groundwater in onsite wells ranges seasonally between 4.7 and 11.5 feet bgs. Groundwater flow direction has been measured to the northwest and to the southeast. The gradient is slight, 0.002 ft/ft. The nearest body of surface water is the McKenzie River located approximately 1/2-mile northeast of the Site

Site history.
Based on historical aerial photos the site was undeveloped and possibly agricultural until at least 1965. Grading of the property began in 1975. Building records and interview with the owner indicate that the current fueling station was built in 1994. A previous release was reported at the site in 2001 (Farmers Co-op-Springfield LUST 20-01-7012). The DEQ issued a no further action determination for this release in February 2004.

2. BENEFICIAL LAND AND WATER USE DETERMINATIONS

Land use.
The site and adjacent properties are currently zoned heavy industrial. Heavy industrial zones are intended for processing large volumes of raw materials with transportation needs that include rail and truck however less intensive industrial uses are also permitted. Income-qualified housing is currently not allowed in this industrial zone. Properties on the south side of Olympic are zoned light industrial and residential (R1). Residential R1 is intended to implement low density residential. Based on land use trends in the Eugene-Springfield area, DEQ feels that future residential use is possible to the south of the site.

Groundwater use.
This site is located within mapped groundwater capture zones of the Springfield Utility Board's (SUB) municipal well system. The shallow groundwater at the site has no beneficial use currently because groundwater is not used, and water is provided to the site and surrounding properties by SUB. SUB water supply includes two wells SP1 and SP2 that are located 800 and 1,100 feet from the site (see SUB location map). Groundwater flow at the site has been measured in the northwesterly direction towards SP1 and to the southeast during wet weather. The SUB wells are constructed to depths of 520 and 294 feet. A construction summary is presented in the table below.

	SP1 10758	SP2 10764
Depth drilled	300	520
Depth completed	294	520
Screen depth	160 to 283 feet	No screens, open casing
Seal	0 to 57 feet with cement grout	0 to 20 feet granular bentonite 20 to 39 feet bentonite gel

Surface water use.
The nearest surface water body is the McKenzie River, which is located approximately 0.5 miles northeast of the Site. Stormwater on Site is collected in drains located in both the paved and grass areas. Stormwater collected onsite flows through an oil-water separator located just south of the building on Site. Additional storm drains are located on 30th Street. Stormwater collected from Olympic Street discharges to the Q Street Floodway, a channelized stormwater ditch that moves floodwater out of the area and discharges to the McKenzie River.

3. INVESTIGATION AND CLEANUP WORK

A previous release (LUST 20-01-7012) occurred at the site in 2001 and received a no further action determination from DEQ in 2004.

Subsurface investigations were conducted at the site between 2016 and 2020. The initial subsurface investigation detected contamination, which was reported to DEQ, and a Leaking Underground storage tank file (LUST 20-16-1601) was opened. Subsurface investigations included the drilling of seventeen borings, seven of which were completed as monitoring wells (MW-1 through MW-7). The investigations focused on the location of the USTs, oil water separator, and dispensers primarily on the east side of the property. Monitoring wells MW-7 and MW-6 were located on the west side of the site downgradient of the areas of concern. Boring and monitoring well locations are shown on Figure 3 (Sample Location Map, Partner 2020).

Borings extended to depths ranging from 14 to 15 feet bgs. A total of 17 soil samples were collected during the investigations at depths typically between 5 and 10 feet. Field screening was conducted during the entire length of the borings. Groundwater monitoring was conducted at the site between 2016 and 2020. Groundwater and soil samples were analyzed for gasoline and diesel-range hydrocarbons by NWTPH-Gx and NWTPH-Dx, volatile organic compounds (VOCs) by EPA Method 8260B, and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270D-SIM. Groundwater samples from MW-1 through MW-5 were also analyzed for dissolved lead by EPA Method 6010D.

Nature and extent of contamination.
Soil and shallow groundwater have been impacted by the release of petroleum hydrocarbons and associated constituents at the site. The contaminants of interest at the site are gasoline and diesel-range hydrocarbons, VOCs and PAHs. Lead was not detected in groundwater at the site.
Soil contamination is found at depths greater than 3 feet. Diesel-range hydrocarbons in the heavy oil range exist in soil at 5 feet bgs in the vicinity of the oil water separator. Gasoline-range hydrocarbons were detected in soil at 9 feet bgs north of the fuel canopy (MW-3). VOCs and PAHs are also present in soil at very low concentrations. It is unlikely that soil contamination extends offsite based on the locations and concentrations of contamination in soil.

Groundwater samples obtained in 2020 from MW-1 (north side of property), MW-5 (south side of property) and MW-7 (west side of property) were non-detect for contaminants of concern (gasoline and diesel-range hydrocarbons, VOCs, and PAHs). Based on this it is unlikely that groundwater contamination extends offsite in these directions. Diesel-range hydrocarbons were detected in groundwater on the east side of the site (MW-2) and may extend into the right-of-way along 30th street. It is important to note that MW-2 is typically upgradient from the primary sources of petroleum contamination onsite and it is unlikely that contamination extends across 30th street. The highest concentrations of contaminants in groundwater are found in MW-3 located north of the fuel dispensers and west of the USTs. In 2020, the MW-3 water sample still contained concentrations of gasoline and diesel, and various VOCs and PAHs. SUB reported that toluene has been detected in well SP2. SP2 is cross gradient of the shallow groundwater flow at the site and approximately 1,100 feet northeast of the site. Toluene has also been detected in groundwater at the site during sampling in 2024. Benzene, a much more mobile constituent of gasoline than toluene was also detected onsite during 2024.

In July 2025 Partner prepared a SUB Supply Well SP1 Technical Memorandum, which evaluated the threat of site-related contamination to the SUB wells. In October 2025 DEQ conducted further analysis of the threat to the SUB wells. Based on the results of these studies, DEQ is confident that the relatively low levels of petroleum hydrocarbons should not adversely affect water quality at the SUB wells in the vicinity of the site.

4. RISK EVALUATION

Conceptual site model.
The source of contamination at the site is related to historic releases from the UST system. Secondary sources are soil and groundwater contamination.

The receptors being considered for this site are occupational, construction and excavation workers. This is based on the heavy industrial zoning designation of the site and adjacent properties. The pathways of exposure being evaluated are:

- Inhalation and ingestion from tapwater
- Volatilization to outdoor air and vapor intrusion into buildings; and
- Groundwater in excavations for construction and excavation workers.

The direct contact/inhalation pathway is not considered complete because there is no soil contamination in the upper 3 feet at the site. To evaluate human exposure to residual chemical contamination requires an assessment of the type and extent of that exposure. This is based on current and reasonably likely future site use. DEQ publishes risk-based concentrations (RBCs) for contaminants commonly encountered, for different types of exposure scenarios. These RBCs are conservative estimates of protective levels of contaminants in soil, groundwater and air. Table 1 shows potential exposure pathways and receptors for this site. Based on this, applicable RBCs are identified and used for risk screening.

Table 1. Identification of applicable RBCs, based on pertinent pathways and receptors

	Pathway	Receptor	Is pathway complete?	Is RBC Exceeded?	Comments
Soil	Ingestion, Dermal Contact, and Inhalation	Residential	No	NA	Soil contamination is greater than 3 feet deep
		Occupational	No	NA	
		Construction Worker	Yes	No	
		Excavation Worker	Yes	No	
	Volatilization to Outdoor Air	Residential	No	NA	
		Occupational	Yes	No	
	Leaching to Groundwater	Residential	No	NA	Note 1 and 2 Shallow groundwater is not used. Locality of facility does not extend to drinking water wells offsite.
		Occupational	No	NA	
Groundwater	Ingestion & Inhalation from Tap Water	Residential	No	No	Note 1 and 2 Shallow groundwater is not used. Locality of facility does not extend to drinking water wells offsite.
		Occupational	No	No	
	Vapor Intrusion into Buildings	Residential	No	NA	
		Commercial	Yes	No	
	Groundwater in Excavation	Occupational	Yes	No	
Soil Vapor	Vapor Intrusion into Buildings	Residential			Note 3
		Commercial			
Ecological		Terrestrial & Surface Water	No	No	

Notes:

1. Groundwater is not used for drinking. This pathway is therefore not considered, in accordance with Section B.3.2.4 of DEQ's RBDM guidance.
2. Municipal water is provided by the Springfield Utility Board. Local groundwater is not currently used for drinking water and is not likely to be used for this purpose in the future.
3. Concentrations of contaminants in groundwater did not exceed the vapor intrusion RBCs therefore soil vapor was not assessed. Concentrations of contaminants did not exceed the vapor intrusion screening levels.

Contaminant concentrations.

Contaminants present in soil at the site are gasoline and diesel-range hydrocarbons and associated volatile organic compounds including benzene, toluene, ethylbenzene and xylenes. Contaminants were detected at depths of 5 feet or greater and only in locations on the south and southwest side of the building, oil water separator and canopy. Concentrations are considered low relative to their associated RBCs.

Soil		
Contaminant of Concern	**Maximum Concentration mg/kg**	**Are any applicable RBCs exceeded?**
Gasoline-range hydrocarbons	56.3	No
Diesel-range hydrocarbons	128	No
Benzene	0.03130	No
Toluene	1.20	No
Ethylbenzene	0.682	No
Xylenes	3.90	No
Naphthalene	0.37300	No

Contaminants present in groundwater are gasoline and diesel-range hydrocarbons and associated volatile organic compounds including benzene, toluene, ethylbenzene and xylenes. PAHs were also detected. Groundwater contamination does not extend offsite. The highest concentrations were detected in the center of the site at MW-3.

Groundwater		
Contaminant of Concern	**Maximum Concentration µg/l**	**Are any applicable RBCs exceeded?**
Gasoline-range hydrocarbons	405	No
Diesel-range hydrocarbons	134	No
Benzene	8.67	No
Toluene	3.16	No
Ethylbenzene	16.2	No
Xylenes	39.5	No
Naphthalene	2.57	No
PAHs	<1	No

Human health risk.
There is no soil ingestion, dermal contact, and inhalation risk for any receptors.

Groundwater contains low levels of gasoline, gasoline constituents, and diesel. However, drinking water to the site and surrounding area is supplied by the SUB which have drinking water wells located within a ¼ mile of the site. Partner and DEQ evaluated the fate and transport of these contaminants and the likelihood of their impacting the SUB wells (Hydro Review of July 29, 2025, DEQ). DEQ has concluded that the SUB wells should not be affected by the site contamination.

Vapor intrusion is also not a threat at the site because of the low levels of contamination in soil and groundwater.

Ecological risk.
The site is paved around the fueling facilities and provides no ecological habitat. There is no surface contamination that could run off with storm water or affect terrestrial receptors. There are, therefore, no unacceptable ecological risks identified for the site.

5. RECOMMENDATION

Based on the current site conditions, potential future uses of the site, and sample results for soil and groundwater, acceptable risk levels are not exceeded and DEQ recommends a no further action (NFA) determination for this site.

The No Further Action determination should be recorded in DEQ's environmental data management system also known as Your DEQ online (YDO) under project number 20-16-1601.

6. ADMINISTRATIVE RECORD

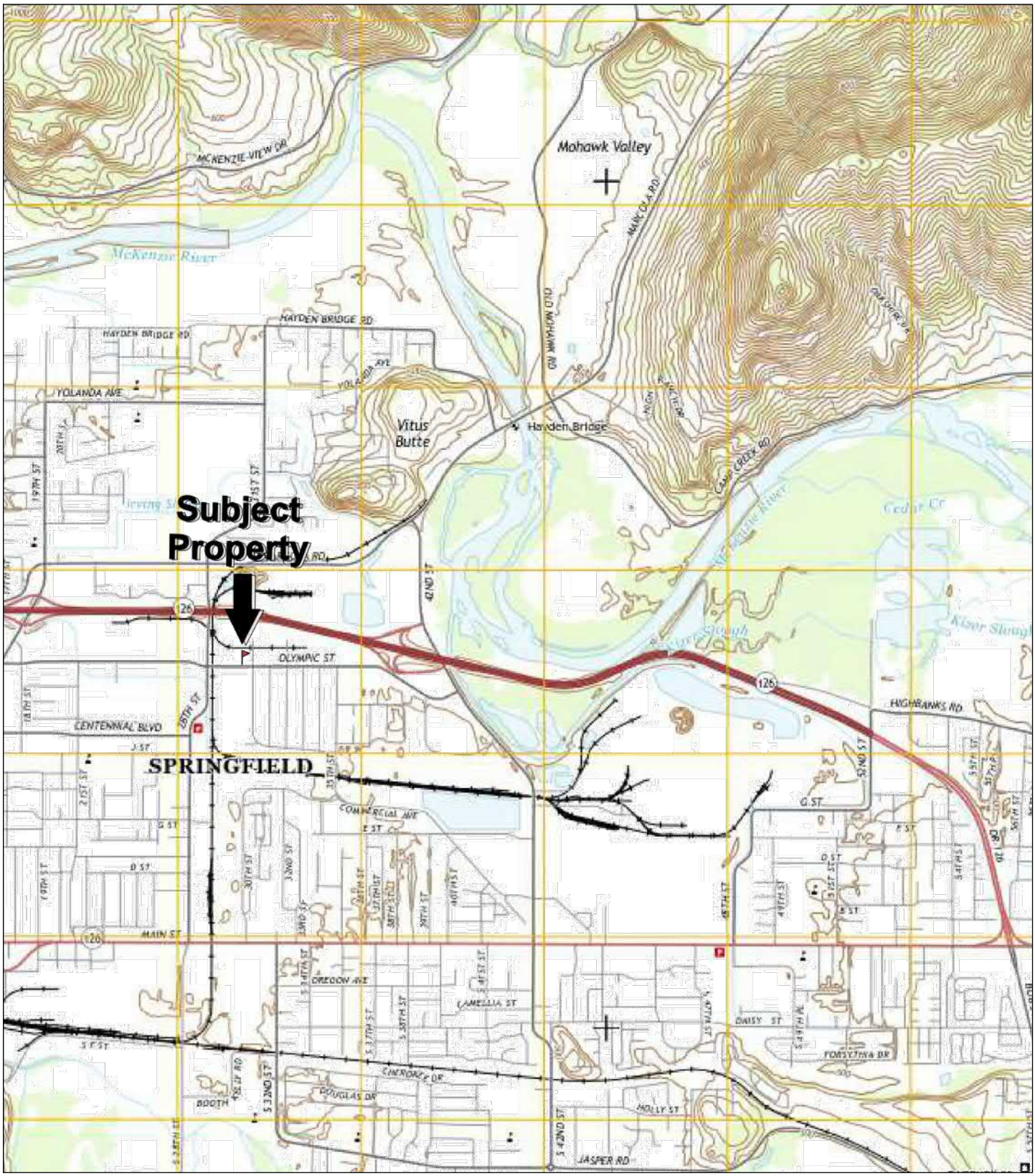
2016-05-26_20-16-1601_Phase1SiteAssessment.pdf
Jan 2018 MW Report Springfield Cardlock.pdf
Jan 2020 GMW RBC Report Springfield Cardlock 1of2.pdf
Jan 2020 GMW RBC Report Springfield Cardlock 2of2.pdf
Sept 2016 Phase II 1of2 Springfield Cardlock.pdf
Sept 2016 Phase II 2of2 Springfield Cardlock.pdf

2020-07-17_20-16-1601_AdditionalGWCharacterizationWorkPlan.pdf
2021-02-26_20-16-1601_AdditionalGWCharacterizationRpt.pdf
2021-06-14_20-16-1601_GWMR_MARCH21.pdf
2021-08-17_20-16-1601_GWMR_JUNE21.pdf
2021-11-18_20-16-1601_GWMRSept21.pdf
2024-06-18_20-16-1601_GWMRMar24.pdf
2024-11-13_20-16-1601_GWMRSept24.pdf
2025-02-18_20-16-1601_GWMRDec24.pdf
2025-10-30_20-16-1601_HydroReview_Text_Final

These documents and others are available digitally through our online records management system YDO. Older projects may also have paper files. Paper files are available through a public records request.

7. ATTACHMENTS

1. Site Vicinity Map (Partner Engineering and Science, Inc.)
2. Location Map of SP1 & SP2 (Springfield Utility Board)
3. Site Map (Partner Engineering and Science, Inc.)



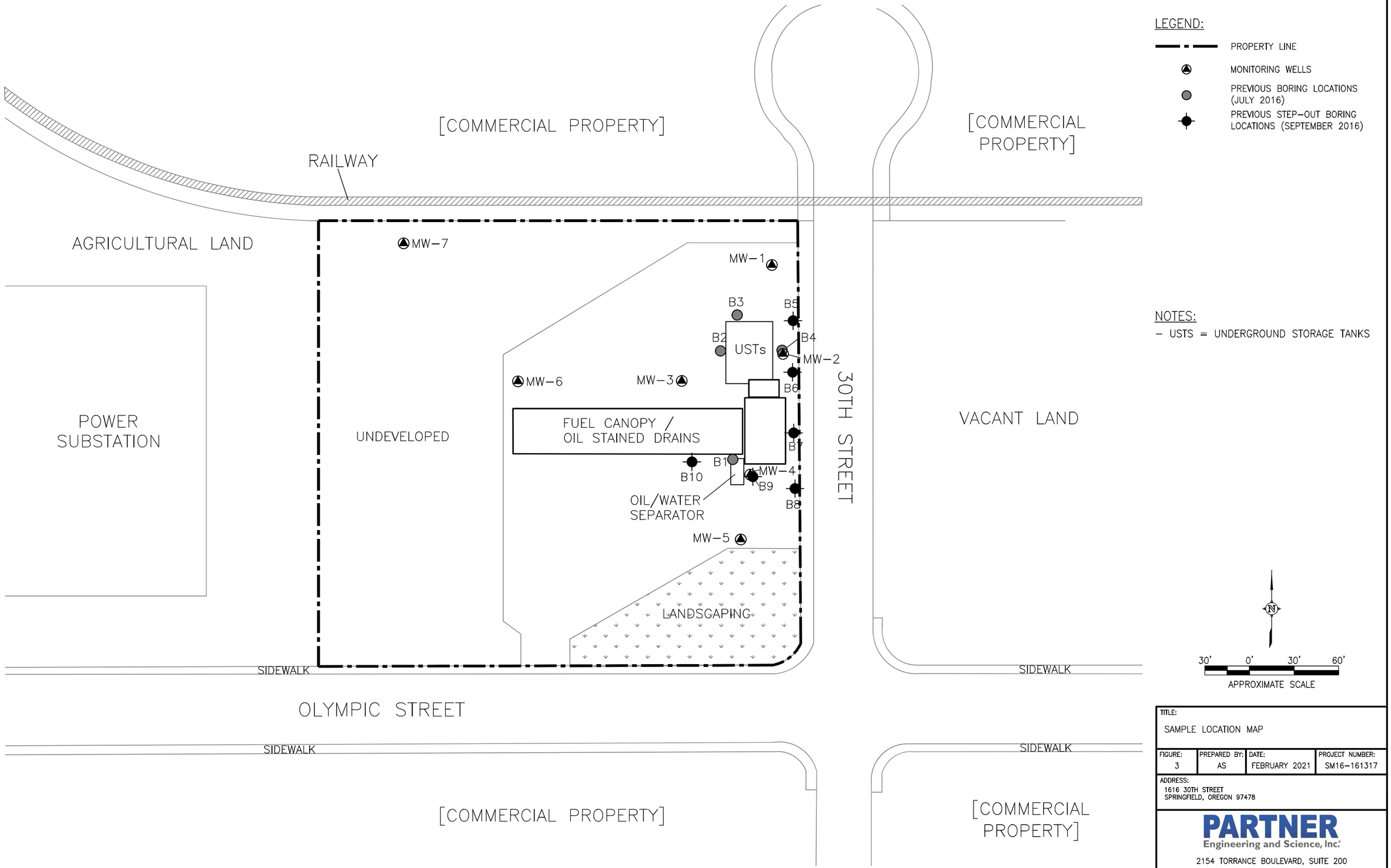
LEGEND:

USGS SPRINGFIELD, OREGON QUADRANGLE
VERSION: 2014 CURRENT AS OF: 2014

TITLE: SITE VICINITY MAP			
FIGURE: 1	PREPARED BY: DM	DATE: OCTOBER 2019	PROJECT NUMBER: SM16-161317

ADDRESS:
1616 30TH STREET
SPRINGFIELD, OREGON 97478

PARTNER
Engineering and Science, Inc.
2154 TORRANCE BOULEVARD, SUITE 200
TORRANCE, CALIFORNIA 90501



TITLE: SAMPLE LOCATION MAP

FIGURE:	PREPARED BY:	DATE:	PROJECT NUMBER:
3	AS	FEBRUARY 2021	SM16-161317

ADDRESS:
1616 30TH STREET
SPRINGFIELD, OREGON 97478

PARTNER
Engineering and Science, Inc.
2154 TORRANCE BOULEVARD, SUITE 200
TORRANCE, CALIFORNIA 90501

LOCATION MAP OF SP1 & SP2 TO CFN GAS STATION

SCALE NONE	DRAWN EJN	SPRINGFIELD UTILITY BOARD	DRAWING NUMBER
DATE 2/19/2020	ENG AC	WATER ENGINEERING DIVISION	
DIST MAP #10F,G	APPR	SPRINGFIELD , OREGON	
REVISION	SHEET OF		

S:\Drawings\Misc\SP1 SP2 CFN.dwg – Feb 19, 2020 – 2:19pm Plotted by: ericn