

Date: December 1, 2025

To: FILE

Through: Brad Shultz, Program Manager,
Don Hanson, RG Lead Worker
Western Region Environmental Cleanup and Emergency Response

From: Rachel Murphy
Western Region Project Technician

Subject: UNOCAL 4140, LUST20-90-4095; 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 UNOCAL 4140 (the site), in Eugene. As discussed in this report, contaminant concentrations in soil, vapor, 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 the key administrative record documents is presented at the end of this report.

1. BACKGROUND

Site location.

- Address: 2115 Franklin Blvd, Eugene, Lane Oregon.
- Latitude 44.0451° North, longitude -123.0613° West
- Tax lot(s) 700, Township 17 South, Range 3 West, Section 33
- See attachments for vicinity map

Site setting.

The site is 0.33 acres and located in downtown Eugene. Current features on this site include an asphalt paved parking lot and elevated coffee kiosk. Concrete sidewalks border the south and east edges of the property. A hotel (Holiday Inn & Suites) is located immediately north of the site. West of the property, across Walnut Street, is a permitted gas station. Directly south of the property is Franklin Blvd which is divided by a bus stop located on a median strip. The property south of the bus stop is a Transpiration Service center for University of Oregon. East of the property is a multi-story in-home elder care center.

Physical setting.

The site is situated in a predominantly flat urban area with gentle slopes. On site there are minimal elevation changes. North of the property the land slopes downward to the north as you move closer to the Willamette River, which is located approximately 600 ft north of the site. East of the land elevations increase as you move closer to Franklin City Park.

The asphalt is underlain with approximately two feet of brown above, gray medium gravel, sand and silt (reported as fill). There is a dense layer of sandstone between 8.5-20 feet below ground surface (bgs) throughout the site, which is likely bedrock.

The depth to groundwater on site is inconsistent across the site. The depth to groundwater has a varied range from 3 feet to 13 feet below ground surface. Estimated shallow groundwater flow direction varies but is generally east or northeast. There also appears to be a groundwater mound¹ or divide across the site (Geo Engineers, 1995).

Site history.

The site was developed as Unocal Service Station #4140 in 1956. Site history prior to 1956 is unknown. The original service station included five underground storage tanks (UST), including two 6,000-gallon gasoline tanks, one 550-gallon heating oil tank, one 280-gallon waste oil tank and one-gallon white gas tank.

The original station building and was demolished in 1969. This work included the removal of two dispenser islands and two 6000-gallon gasoline USTs. Following demolition, a new service station building was constructed and two ten-10,000-gallon gasoline USTs, one 550-gallon heating oil tank, one 550-gallon waste oil UST, and two fuel dispenser islands were installed onsite.

The station was permanently closed and demolished between 1992 and 1993. This included the decommissioning by removal of the seven remaining UST systems and 550-gallon heating oil tank. In 2001, Union Oil Company of California sold the site to Dutch Bros LLC, which subsequently converted it into an elevated coffee kiosk and drive thru.

Land use.

The site is zoned as Walnut Station Special Area Zone (S-WS) which is a mixed-use zoning designed to implement the Walnut Station Specific Area Plan developed by the City of Eugene. The site is also included in a subsection of zoning designated as Franklin Corridor Frontage district (S-W S/FC) to encourage retail uses. Current land use is commercial retail coffee shop. Reasonably anticipated future land use at the site is retail or commercial use. Based on the “The Walnut Station Specific Area Plan”, published by the City of Eugene in July 2010, the immediate station area is zoned for retail frontage. The City of Eugene plans to complete a partial taking of the lot to build a traffic circle.

¹ *Results of Quarterly Monitoring and Ground Water Sampling April 1995.* Geo Engineers, 3 July 1995.

Groundwater use.

Water is provided to the site and surrounding properties by the Eugene Water and Electric Board (EWEB). A Beneficial Water Use survey was conducted by Geo Engineers using well logs from Oregon Water Resources Department (OWRD) online well log database. Summary of this search encompassing the site includes 21 water supply wells, 14 of these wells are located within 250 feet of the site. Seven well logs did not contain any location information. No water supply wells are present at the site or on adjacent properties. DEQ feels that is unlikely that shallow groundwater would be used for domestic uses in the vicinity of this site in the future.

Surface water use.

There are no surface water features present on or adjacent to the site. The nearest surface water is the Willamette River located approximately 600 feet north of the site. Stormwater at the site drains to Franklin Blvd. and an onsite catch basin located on the south side of the site. A concrete stormwater drain is located along Franklin Blvd at the south-east corner of the property. These catch basins drain into the City of Eugene's stormwater sewer system. Stormwater typically discharges to surface water, likely the Willamette River.

2. INVESTIGATION AND CLEANUP WORK

During a site investigation in 1990 gasoline contaminated soil and groundwater were encountered. The quantity of product released to the environment is unknown. The release was reported to the Department of Environmental Quality and leaking underground storage tank (LUST) file 20-90-4095 was opened.

Following the release discovery, the gas station was permanently closed and demolished in 1991. This included the decommissioning by removal of the seven remaining UST systems and 550-gallon heating oil tank. Between 1990 and 2024 site investigations and remediation was conducted at the site.

Investigations included the drilling of 21 borings, 32 test pits, installation of 13 monitoring wells, and installation of 3 soil vapor wells. Three borings were also drilled offsite in the right-of-way on Walnut Street, one in the Franklin Blvd median, and one in the adjacent parking lot east of the site and completed as monitoring wells (MW6-MW11). A total of 108 soil samples were collected during the investigations and UST decommissioning. Soil samples were analyzed for NWTPH -Gx, NWTPH -Dx, VOC 8260D, PAHs EPA 8270E, Metals EPA 6020, and PCB (list out methods)

The initial groundwater sampling conducted in 1990 and throughout 1999 found that the primary contamination was gasoline and diesel contamination. Free product was measured in MW-4 in 1991 and continued to have trace amount until 1999 but was not encountered in any other wells on or off site.

Remediation at the site included soil excavation and removal, free product removal, and natural attenuation. In 1992 approximately 850 cubic yards of petroleum contaminated soil was excavated during the UST decommissioning and transported to Short Mountain Landfill in

Goshen, Oregon for disposal. Free product in MW-4 was removed by hand until a passive recovery system was installed in December 1994. However, the thickness of the product did not allow for the proper collection using the system, and sorbent pads were used to recover product from well. Free product thickness steadily decreased over time and the and was discontinued in February 1995. Sorbent pads were stored in secure and labeled drums on site before being disposed.

Monitoring wells MW-3, MW-5, MW-6, MW-7, and MW-9 were identified as removed, missing, or damaged during the investigation in 2023. Monitoring wells MW-2 and MW-13 deemed inaccessible due to their location. Monitoring wells MW-1, MW-4, and MW-10 were sampled in 2023 and analyzed for Gasoline range hydrocarbons by NWTPH-Gx, Diesel and oil-range hydrocarbons by NWTPH-Dx, Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and dissolved metals by EPA Method 6020. Some wells have been damaged, others have been removed, and some remain active. The Water Resources Department will be notified of any wells that require proper abandonment during the project's closure process.

Three temporary soil vapor wells (SV-1 though SV-3) were installed onsite in 2023. Soil vapor samples were analyzed for VOC EPA Method TO-15. These soil vapor wells were abandoned after sampling in 2023.

Nature and extent of contamination.

Soil, groundwater, and soil vapor at the site have been contaminated with petroleum hydrocarbons and associated constituents. The contaminants of concern are gasoline (TPH-G), diesel (TPH-D), and oil range (TPH-O) hydrocarbons, benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl t-butyl ether (MTBE), naphthalene, iso-propyl benzene, n-propyl benzene, and lead.

Prior to the cleanup, the highest concentrations of TPH-G, TPH-D and TPH-O detected in soil were 5,200 mg/kg, 40,000 mg/kg, 120,000 mg/kg respectively. The highest detections in the soil were detect in samples collected from the around the abandoned USTs in 1991. Approximately 850 cubic yards of petroleum contaminated soil was excavated during the decommissioning and removal of the USTs. Contaminated soil remains on the outside of the historical excavation pit. Soil samples from the most recent investigation in 2023 around the site range from 330 mg/kg TPH-O to non-detect for TPH-G and TPH-D. The detections for TPH-O were approximately 2-8 feet bgs. The remaining TPH-O maximum concentration detected on site exceed Risk-Based Concentrations (RBCs) for residential leaching to groundwater. Concentrations of VOCs, PAHs, Metals on site did not exceed applicable RBCs.

Groundwater beneath the site is contaminated with TPH-G, TPH-D, TPH-O, and several VOCs, specially BETX, naphthalene, and MTBE. The highest concentrations on site historically were detected in monitoring wells MW-2 and MW-4. Free product identified as emulsified petroleum was measured in MW-4 from 1991 to 1999. Free product thickness was not measurable in 2023. Concentrations of chemicals detected in groundwater on site have decreased overtime. For

example, benzene was detected at a concentration of 5,200 µg/L at MW-2 in 1996 but then decreased to 113 µg/L by 1999.

Groundwater samples were collected from MW-1, MW-2, MW-4 and MW-10 between July 2023 and December 2024. No contamination was detected in MW-1. Contaminants were non-detectable in MW-2 except for MTBE (1.52 µg/L). Concentrations of TPH-G (235 µg/L), TPH-D (2,340 µg/L), and MTBE (3.05 µg/L) were detected in MW-4 less than historical levels indicating continued natural attenuation of contaminants.

Offsite wells MW-6, MW-7, MW-8, MW-9 and MW-11 were also sampled. No contaminants were detected in MW-9 (north of the site), MW-7 (southwest of the site) and MW-11 (west of the site) after the initial sampling in 1995. Contaminants were not detected in MW-8 (east of the site) and MW-6 (southeast of the site) during the last two sampling events in 1996 and 1997. Detections of VOCs have reduced to non-detect since 1996 showing evidence of natural attenuation.

In 2023, soil vapor was investigated near MW-2 and the former dispenser island, locations known for historically high contamination and now home to the evaluated coffee kiosk. Most VOCs were not detected, except for 1,1,2-trichloroethane (1,1,2-TCA), 1,3-butadiene, and acrolein. However, these substances are not considered contaminants of concern (COCs) for this site and are unlikely to be linked to past site activities.

3. RISK EVALUATION

Conceptual site model.

The original source of contamination was the USTs and the associated piping and dispensers. The UST systems were removed during decommissioning activities shortly after the discovery of the release. Soil, groundwater, and soil vapor were all impacted by the release. The receptors for this site are occupational/commercial, construction works, and excavation workers. Due to the current and planned use of the site and restrictive zoning, pathways for residential are considered incomplete.

Pathways to human receptors include:

- Soil ingestion, dermal contact and inhalation to construction, occupational and excavation workers.
- Groundwater in excavation.
- Vapor intrusion into buildings for commercial receptors.

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 and/or Urban Residential	No	No	Zoning does not allow residential use.
		Occupational	Yes	No	Shallow residual petroleum was present at the excavation boundaries and in borings and test pits outside of the historical excavation area.
		Construction Worker	Yes	No	Source area contaminated soils were excavated but low levels of contamination remain in the soil below RBC.
		Excavation Worker	Yes	No	
	Volatilization to Outdoor Air	Residential and/or Urban residential	No	No	Zoning does not allow residential use.
		Occupational	Yes	No	
	Volatilization to Indoor Air	Residential	No	No	See Note ¹ .
		Commercial	No	No	
	Leaching to Groundwater	Residential and/or Urban residential	No	No	No current or reasonably likely future use of groundwater for domestic purposes.
		Occupational	No	No	
Groundwater	Ingestion & Inhalation from Tap Water	Residential and/or Urban residential	No	Yes	City water is provided. Local groundwater is not currently used for drinking water and is not likely to be used for this purpose in the future.
		Occupational	No	Yes	
	Volatilization to Outdoor air	Residential	No	No	
		Urban residential	No	No	
		Occupational	Yes	No	
	Vapor Intrusion into Buildings	Residential	No	Yes	Zoning does not allow residential use.
Commercial		Yes	Yes		

	Groundwater in Excavation	Construction & excavation worker	Yes	No	
Soil Vapor	Vapor Intrusion into Buildings	Residential	No	Yes	Zoning does not allow residential use.
		Commercial	Yes	No	See Note ² .
Ecological		Terrestrial & Surface Water	No	No	

Note 1: DEQ does not have RBCs for volatilization to indoor air from soil. However, soil contaminated with greater than 500 ppm for diesel and 80 ppm for gasoline is considered a potential VI source.

Note 2: 1,3-Butadiene and acrolein were detected in the soil vapor sample, however these detections were determined to be false positives by the lab and/or from contamination on the vapor sampling equipment.

Current Contaminant concentrations.

Soil

Contaminant of Concern	Maximum Residual Concentration mg/kg	Are any applicable RBCs exceeded?
Gasoline-range hydrocarbons	ND (<6.29)	No
Diesel-range hydrocarbons	ND (<23.4)	No
Oil-range hydrocarbons	330	No
Naphthalene	0.0124	No
Other VOCs	ND	No
Chromium	51.7	No
Lead	7.36	No

Groundwater

Contaminant of Concern	Maximum Concentration (most recent event) µg/l	Are any applicable RBCs exceeded?
Gasoline-range hydrocarbons	326	No
Diesel-range hydrocarbons	153	No
Oil-range hydrocarbons	927	No
Naphthalene	ND	No
MTBE	3.05	No
n-Propylbenzene	3.04	No
Chromium	ND	No
Dissolved Lead	0.927	No
Arsenic	1.51	No

Soil Vapor

Contaminant of Concern	Maximum Concentration µg/m ³	Are any applicable RBCs exceeded?	Notes
1,3-Butadiene	56.4	Yes	Attributed to sampling equipment cross contamination.
Acrolein	11	Yes	

Human health risk.

Contamination remains in soil on the site. Contaminants of concern remaining in soil are below applicable RBCs for ingestion, dermal contact, and inhalation, and volatilization to outdoor air. The Walnut Street Special Area zoning for the City of Eugene prohibits residential use on the ground floor of this lot. Due to the lot's limited size and the setback requirements under current city zoning regulations, the property is not suitable for residential development thus the residential pathway is considered incomplete.

Groundwater contamination remains on site. Groundwater monitoring indicates contamination has decreased over time and is expected to continue to decrease through natural attenuation. Concentrations of contaminants in groundwater are below applicable RBCs for construction and excavation workers. There is no potable groundwater source on site; however, the property is connected to the municipal water supply and is expected to remain on city water.

Soil vapor contamination has been detected at the site in the vicinity of coffee kiosk. No site-related COCs were detected at concentrations greater than chronic commercial vapor intrusion 2023 RBCs. The detections of 1,3-Butadiene and acrolein in the soil gas are not believed to be present in the subsurface, therefore there is no risk posed by these chemicals.

Ecological risk.

The surrounding area is either fully developed or paved within 100 feet of the affected zone. Impacted groundwater does not discharge to surface water or encounter aquatic sediments. As a result, no unacceptable ecological risks have been identified for the site.

4. RECOMMENDATION

Based on historical information, current site conditions, and current site use, DEQ recommends a No Further Action (NFA) determination for this site. Significant amounts of contamination have been removed, and sample results for soil, groundwater, and soil gas indicate that acceptable risk levels are not exceeded. The low levels of soil and groundwater contamination remaining in place is expected to continue to naturally attenuate and decrease in concentrations over time. The No Further Action determination should be recorded in DEQ's environmental data management system Your DEQ Online (Facility No. 00974 and LUST No. 20-90-4095).

5. ADMINISTRATIVE RECORD

Report of Geotechnical Service Environmental Site Characterization, UNOCAL 4140, Eugene, Oregon. Prepared by Miller-James P.E. August 27, 1990.

Report of Environmental Services Additional Subsurface Explorations and Groundwater Monitoring, UNOCAL 4140, Eugene, Oregon. Prepared by Julia Fowler P.E. February 27, 1995.

Permit for Off-site Frilling and Monitoring Well Construction, UNOCAL 4140, Eugene, Oregon. Prepared by Julia Fowler P.E. November 10, 1995.

Free Product Removal, UNOCAL 4140, Eugene, Oregon. Prepared by George Saunders P.E. November 27, 1991.

Letter Report Data Gap, UNOCAL 4140, Eugene, Oregon. Prepared by Chris Breemer R.G. January 21, 2025.

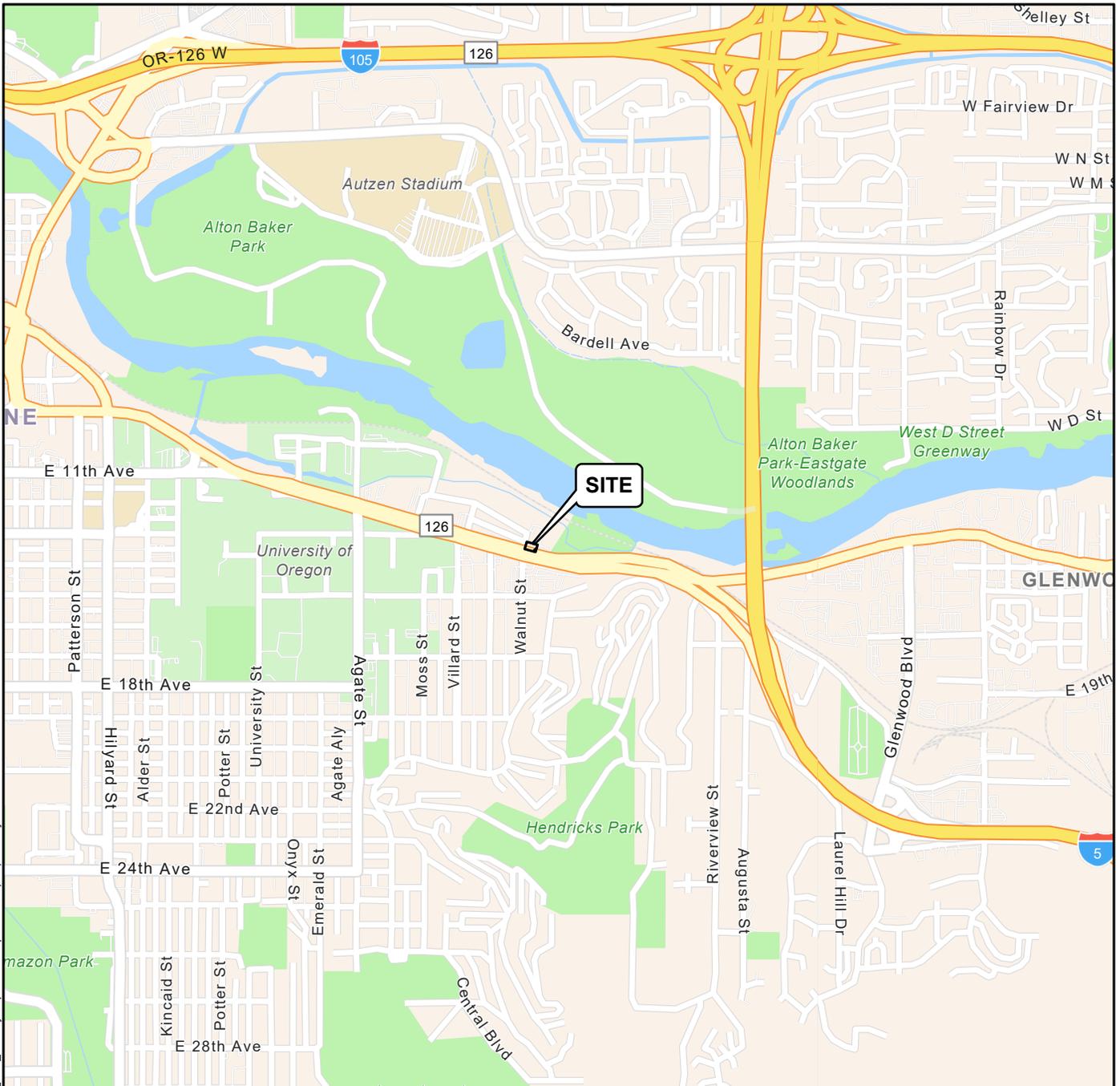
Risk-Based Closure Report, UNOCAL 4140, Eugene, Oregon. Prepared by Cris Watkins. May 2, 2024.

S-WS Walnut Station Special Area Zone, City Records Office, Eugene, Oregon. Prepared by City of Eugene. July 12, 2010.

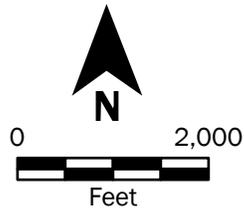
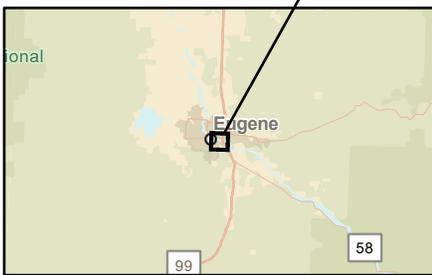
These documents are available through our online records management system. Additional documents are available in our paper files through a public records request.

6. ATTACHMENTS

1. Vicinity map
2. Site map



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Vicinity Map	
2115 Franklin Boulevard Eugene, Oregon	
	Figure 1

Source(s):
 • ESRI

Coordinate System: NAD 1983 UTM Zone 10N

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UST	DESCRIPTION
A	550-GALLON WASTE OIL UST (REMOVED)
B	550-GALLON HEATING OIL UST (REMOVED)
C	10,000-GALLON GASOLINE UST (REMOVED)
D	FORMER 6,000-GALLON GASOLINE UST (REMOVED)
E	ABANDONED UST #1 280-GALLON WASTE OIL UST (REMOVED)
F	ABANDONED UST #2 550-GALLON HEATING OIL UST (REMOVED)
G	FORMER 110-GALLON WHITE GAS UST (REMOVED)

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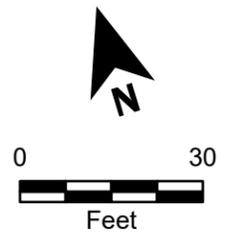
Source(s):
 • Bing
 • Locations from GeoEngineers

Coordinate System: NAD 1983 HARN StatePlane Oregon South FIPS 3602 Feet Intl

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Legend

- Monitoring Well
- Former UST Approximate Location
- Former Site Features Approximate Location
- Former Remedial Excavation Area Approximate Location (1991)
- USTs Prior to Reconstruction of Service Station Approximate Location
- Site Boundary



Site and Historic Property Features	
2115 Franklin Boulevard Eugene, Oregon	
	Figure 2

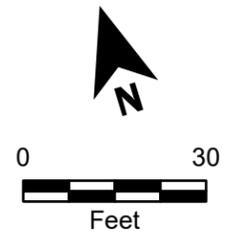


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Notes:
 1. COCs = Contaminants of Concern
 2. RBCs = Risk Based Cleanup Levels
 3. * = COCs exceeding the RBCs were limited to the leaching to groundwater pathway for occupational receptors.
 Source(s):
 • Bing
 • Locations from GeoEngineers
 Coordinate System: NAD 1983 HARN StatePlane Oregon South FIPS 3602 Feet Intl
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Legend

- Monitoring Well
- ⊕ Test Pit
- ⊕ Boring
- Remedial Excavation Confirmation Sample
- COCs Were Either Not-Detected or Removed During Remedial Excavation Activities
- COCs Were Detected at Concentration(s) Less than DEQ RBCs
- COCs Were Detected and Concentration(s) Greater than the RBCs.*
- Former UST Approximate Location
- ▭ Former Remedial Excavation Area Approximate Location (1991)
- ▭ Former Site Features Approximate Location
- ▭ Site Boundary



Historic Sample Locations	
2115 Franklin Boulevard Eugene, Oregon	
	Figure 3



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Notes:
 1. NS = Not Sampled
 Source(s):
 • Bing
 • Locations from GeoEngineers

Coordinate System: NAD 1983 HARN StatePlane Oregon South FIPS 3602 Feet Intl

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Legend

Existing Monitoring Well	Former Site Features Approximate Location	COCs Were Detected at Concentration(s) Less than DEQ RBCs
Soil Boring Location 2023	Former Remedial Excavation Area Approximate Location (1991)	COCs Were Detected and Concentration(s) Greater than the RBCs.*
Soil Boring/Soil Vapor Sample Location 2023	Site Boundary	Not Sampled
Groundwater Locality of Facility	COCs Were Not-Detected	
Former UST Approximate Location		

Feet

Site Plan with 2003 Sample Results	
2115 Franklin Boulevard Eugene, Oregon	
	Figure 4