State of Oregon
Department of Environmental Quality Memorandum

Date: April 12, 2024

To: FILE

Through: Brad Shultz and Don Hanson

From: Sarah Kingery
Western Region

Subject: Lane County-Florence LUST 20-02-1574; 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 Lane County-Florence site, in Florence. 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 copy of the administrative record index is presented at the end of this report.

1. BACKGROUND

Site location.
The site's location can be described as follows:
- Address: 1300 West 20th Street, Florence, Oregon.
- Latitude 43.9838 North, longitude -124.106 West
- Tax lot 105, Township 18 south, Range 12 west, Section 27

Site setting.
The site is approximately 6 ¼ acres in size. Approximately ½ of the property is unpaved and used for materials storage that includes construction materials and sand and gravels. There is an office building, shops for equipment and vehicle repair, and storage.

Kingwood Street borders the west property line, and the municipal airport is located on the other side of Kingwood Street. The property is bordered by 20th street to the north. Small industrial buildings are located south of the site. The City of Florence's Miller Park is adjacent to the east side of the site. The site and properties to the north, south and west are zoned Limited Industrial, with no residential allowances. Miller Park is zoned open space.

Physical setting.
The site and surrounding properties are on flat land. Depth to groundwater was encountered at five feet below ground surface (bgs). Geology in the area is typically Holocene dune sand. The groundwater flow direction is unknown but likely trends to the northwest based on the flow of the Siuslaw river located approximately 4,000 feet to the west (Figure 1-Vicinity Map).

Site history.
The site has been operated as the Lane County Shop since 1979. Use prior to 1979 is unknown.

2. BENEFICIAL LAND AND WATER USE DETERMINATIONS

Land use.
The site is zoned for limited industrial by the city of Florence and has been a Lane County facility since 1979. The current land use is not expected to change.

Groundwater use.
Groundwater in the vicinity is not used for drinking water. The city of Florence provides water to the site and surrounding properties. Burgeson-Boese and Associates (BB&A) conducted a beneficial groundwater use survey in 2007 which did not identify wells within a one-quarter mile radius of the site.

Surface water use.
The nearest surface water to the site is the Siuslaw river located approximately 4,000 feet to the west. This section of the river is tidally influenced. Stormwater at the site generally infiltrates in unpaved areas or sheet drains to adjacent roadways.

3. INVESTIGATION AND CLEANUP WORK

The focus of the site investigation and cleanup work was a waste oil tank, formerly located in a paved portion of the site (Figure 2). The 1,000-gallon underground storage tank (UST) was decommissioned by removal in 1990. Confirmation soil sample obtained from a depth of 6 feet bgs did not detect any contaminants of concern. A new 1,000-gallon UST was installed in the same location.

In 2002, the second waste oil tank was decommissioned by removal and not replaced. Four soil samples and one water sample (collected from the pit water) were obtained from the excavation. Soil samples were analyzed for total petroleum hydrocarbons (NWTPH-HCID), diesel and oil-range hydrocarbons (NWTPH-Dx), volatile organic compounds (VOCs by EPA Method 8240B), polynuclear aromatic hydrocarbons (PAHs by EPA Method 8270C), polychlorinated biphenyls (PCBs by method 8270C), and leachable toxic metals by TLCP Metals. The water sample was analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX by EPA Method 8021B).

Analytical results confirmed the presence of diesel and heavy-oil range hydrocarbons and PAHs in soil and pit water. The release was reported to DEQ on December 13, 2002, and the Leaking Underground Storage Tank (LUST) file 20-02-1574 was opened.

Approximately 3 tons of contaminated soil was excavated during the second decommissioning and taken to Short Mountain Landfill for disposal.

A site characterization was completed at the site in 2005. Four push probes were completed to delineate the area of contamination in the vicinity of the former UST excavation. Soil samples were analyzed for diesel and lube-oil range hydrocarbons using NWTPH-Dx and one soil sample was also analyzed for VOCs and PAHs. One groundwater sample was also obtained and analyzed for VOCs by EPA Method 8260 and PAHs by GC/MS SIM.

Nature and extent of contamination.
The contaminants of interest (COI) at the site are diesel and oil-range hydrocarbons and some VOCs and PAHs (See Table 2 for a complete list of detected analytes).

Contaminated soil remains in the north wall of the former excavation in a zone approximated to be 8-14 feet bgs and to extend under the cement pad. BB&A estimated the amount of residual contaminated soil at 50 cubic yards.

Low levels of PAHs were detected in water collected directly from the pit. Subsequent groundwater sampling from borings were non-detect for PAHs and VOCs indicating that groundwater was not impacted.

4. RISK EVALUATION

Conceptual site model.
The source of contamination at the site was the heating oil tank which has been removed. Residual soil contamination remains at a depth of 8-14 feet and is located beneath a concrete pad. Groundwater has not been impacted.

The site use and zoning is industrial and therefore only occupational receptors are being considered for this site. Remaining soil contamination is at a depth greater than 3 feet and therefore the soil ingestion, dermal contact and inhalation pathway is incomplete for occupational receptors. Water is supplied by the city of Florence and based on a water use survey the water beneath the site has no beneficial use resulting in the leaching to groundwater pathway to be incomplete.

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. CONCEPTUAL SITE MODEL TABLE -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	N/A	Soil contamination is greater than 3 feet depth and site is zoned Limited Industrial with no residential allowances.
		Occupational	No	No	
		Construction Worker	Yes	No	
		Excavation Worker	Yes	No	
	Volatilization to Outdoor Air	Residential and/or Urban residential	No	No	
		Occupational	No	No	
	Leaching to Groundwater	Residential and/or Urban residential	No	No	Water is provided by city. No beneficial use of groundwater in the area was identified. (1,2)
		Occupational	No	No	Water is provided by city. No beneficial use of groundwater in the area was identified. (1,2)
Groundwater	Ingestion & Inhalation from Tap Water	Residential and/or Urban residential	No	No	Water is provided by city. No beneficial use of groundwater in the area was identified. (1,2)
		Occupational	No	No	
	Vapor Intrusion into Buildings	Residential	No	No	
		Commercial	No	No	
	Groundwater in Excavation	Occupational	No	No	
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. 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.

Contaminant concentrations-Table 2
Soil

Contaminant of Concern	Maximum Concentration mg/kg	Are any applicable RBCs exceeded?
Diesel-range hydrocarbons	940	No
Heavy Oil-range hydrocarbons	1,900	No
Benzene	0.015	No
Toluene	0.046	No
Ethylbenzene	2.5	No
Xylenes	20	No
Tetrachloroethene	0.16	No
Isopropylbenzene	0.39	No
1,3,5-Trimethylbenzene	7.2	No
1,2,4-Trimethylbenzene	13	No
Tert-Butylbenzene	0.0065	No
Sec-Butylbenzene	0.48	No
n-Butylbenzene	1.4	No
p-Isopropyl toluene	0.79	No
Naphthalene	2	No
Acenaphthene	0.22	No
Fluorene	0.38	No
Phenanthrene	0.82	No
Anthracene	0.1	No
Fluoranthene	0.25	No
Pyrene	0.91	No
Benzo(g,h,i)perylene	0.41	No
Water		
Contaminant of Concern	**Maximum Concentration µg/l**	**Are any applicable RBCs exceeded?**
Phenanthrene	1.3	No
Anthracene	1.9	No
Fluoranthene	0.5	No
Pyrene	0.6	No
Benzo(a)anthracene	3.6	No
Benzo(g, h, i)perylene	3.8	No

Human health risk.
Residual soil contamination remains at depth. The concentration of diesel-range hydrocarbons in soil in 2005 exceeds the vapor intrusion screening level of 500 ppm. However, because the location of the contamination is at a depth greater than 5 feet and a lateral distance from buildings greater than 30 feet it is unlikely that vapors from the residual soil contamination would migrate and cause a vapor intrusion concern. Further, the maximum diesel concentration

in 2005 exceeded the VI screening level by a factor of less than 2x. It is likely that natural attenuation has occurred, and the current concentrations are much lower, and will continue to improve over time. Concentrations of all other COIs detected were less than the RBCs for applicable pathways for occupational receptors and pose no unacceptable risk to human health.

Ecological risk.
The site is in an active industrial/commercial facility with no ecological habitat. There is no soil contamination at the surface that could affect stormwater and surface water. Groundwater contamination is minimal and should not present a risk of impact to surface water in the vicinity of the site. There are, therefore, no unacceptable ecological risks identified for the site.

5. RECOMMENDATION

Based on sample results for soil and groundwater acceptable risk levels are not exceeded and a No Further Action determination is recommended for this site. The No Further Action determination should be recorded in DEQ's underground storage tank database Facility No. 3519 and LUST No. 20-02-1574.

6. ADMINISTRATIVE RECORD

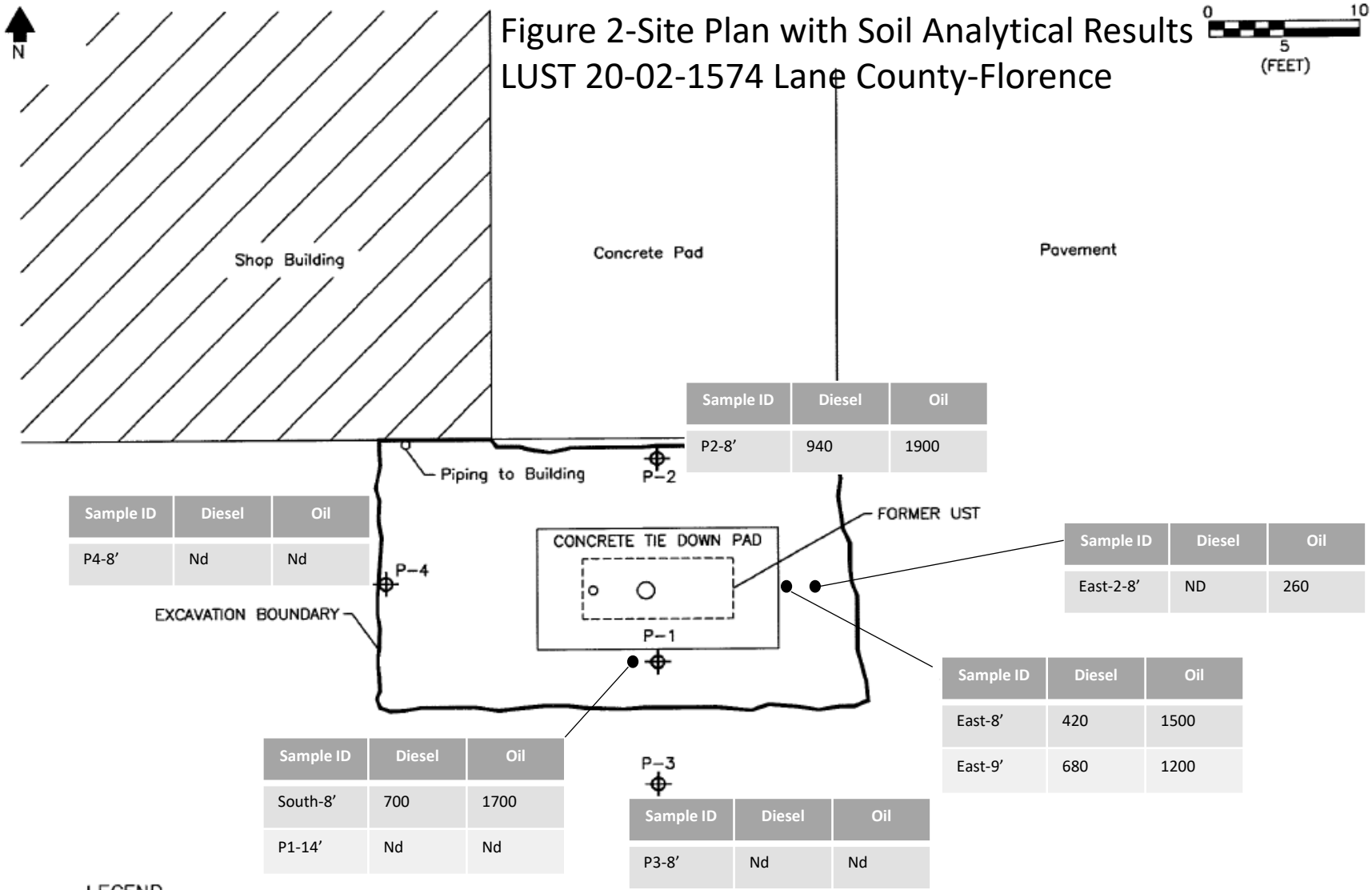
2023-12-15_20-02-1574_NFARequestLetter
2003-02-10_20-02-1574_USTDecommissioning2.pdf
2005-01-12_20-02-1574_Site_characterization.pdf
2017-01-17_20-02-1574_CSM.pdf
1990-06-27_20-02-1574_USTDecommissioning
2002-12-30_20-02-1574_Petroleum_releaseform.pdf

7. ATTACHMENTS

1. Figure 1-Vicinity map
2. Figure 2-Site map

- Lane County-Florence
- LUST 20-02-1574
- Figure 1: Site Vicinity Map

Figure 2-Site Plan with Soil Analytical Results
LUST 20-02-1574 Lane County-Florence



Sample ID	Diesel	Oil
P2-8′	940	1900

Sample ID	Diesel	Oil
P4-8′	Nd	Nd

Sample ID	Diesel	Oil
East-2-8′	ND	260

Sample ID	Diesel	Oil
East-8′	420	1500
East-9′	680	1200

Sample ID	Diesel	Oil
South-8′	700	1700
P1-14′	Nd	Nd

Sample ID	Diesel	Oil
P3-8′	Nd	Nd

LEGEND

P-3 Push Probe Locaiton and Identification Number

● Soil sample from decommissioning

Nd Not detected above reporting limit

Concentrations are in mg/kg

LANE COUNTY PUBLIC WORKS, 1300 W. 20th, Florence, Oregon

SITE PLAN WITH PUSH PROBE LOCATIONS

Bergeson–Boese & Associates, Inc.
Comprehensive Environmental Services
65 Centennial Loop
Eugene, Oregon 97401
(541) 484–9484

Job Code:	LCPW15ISC.02U
CADD File:	LCPW15.DWG
Scale:	1"=10'
Drawn:	KATHRYN DAVIS
Checked:	STEPHEN LAWN
Date:	02/19/03