State of Oregon
Department of Environmental Quality Memorandum

Date: September 3, 2024

To: FILE

Through: Brad Shultz, Manager and Don Hanson, Lead Worker

From: Sarah Kingery
Western Region

Subject: Butler Ford, ECSI #6579; 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 Butler Ford Site in Ashland. 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 010 to 0140 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: 1977 Highway 99 North in Ashland, Oregon.
- Latitude 42.218841° North, longitude 122.738817° West
- Tax lot 1102, Township 38 South, Range 1 East, Section 31

Site setting.
The site is approximately 2.75 acres at an elevation of 1,672 feet above mean sea level. It is flat and paved with asphalt.

Physical setting.
The site is located approximately 1,680 feet above mean sea level. The local topography slopes from the south toward the site, which itself is mostly flat, gently sloping toward Highway 99 to the east. Shallow groundwater is present in coarse alluvium deposits that are present beneath the site to a depth of about 30 feet. Below that, shale/claystone is present, which is fractured in places and water-bearing. Shallow groundwater was observed at the site in the tank pit excavation, but static water levels measured in water wells at the site was reported at 12-14 feet below ground

surface (bgs). It is not clear whether the shallow alluvium aquifer is hydraulically connected to the deeper shale/claystone aquifer where the water wells at the site appear to draw water from. Reportedly, shallow groundwater flow generally follows the local topography, inferred to move north-northwest. The nearest surface water is Bear Creek, approximately 450 feet to the north.

Site history.
The property was developed as a car dealership in 1977 and use has not changed since development. Historic air photographs included in the Phase I report indicate that the property was an orchard in the early 1950s. Use as an orchard was no longer visible in the 1974 photograph. The land was vacant between 1974 and 1977.

Prior to 1988, the site had two underground storage tanks (USTs). These were decommissioned in 1988 and contamination was encountered. The release was reported to DEQ and the leaking underground storage tank (LUST) file was opened (15-88-0013). Approximately 60 cubic yards of contaminated soil was excavated and disposed of at the Ashland Landfill in 1988. Groundwater was encountered in the excavation and no evidence of free-floating product was observed. The LUST file was closed in 2011 with a no further action determination.

2. BENEFICIAL LAND AND WATER USE DETERMINATIONS

Land use.
The site is currently occupied by Butler Ford, with on-site operations including car sales and service. The service garage has a trench floor drain that was connected to an Oil/Water Separator (OWS) on the north side of the service garage. In addition to the building, the site features asphalt-paved parking areas and associated landscaping. The site is zoned as General Commercial. Properties to the north of the site on the other side of Highway 99 include coffee and bicycle shops and a mobile home park. Butler Acura is located to the east, Enterprise Rent-A-Car to the west, and land to the south is vacant.

The General Commercial (GC) zoning of the site allows for detached single family dwellings as well as residential homes and daycare facilities. The site has had a commercial use since 1977. However, given that there are currently residences in the area and current housing shortages, there is a potential for future residential use. If so, it would likely be multi-family apartments or condominiums (urban residential) and not single family residential.

Groundwater use.
The site obtains potable water from a private water well system consisting of one well on-site and another on the adjacent property to the south. These two wells also supply drinking water to the adjacent southern property and the office buildings at 1801 and 1875 Highway 99 North. Groundwater from both wells is pumped to a treatment system located within the adjacent Butler Acura body shop area. The drinking water system is regularly monitored as required under a permit issued by the Oregon Health Authority. Based on the Oregon Water Resources Department (OWRD) two well logs (JACK 19986 and JACK 55240) were identified at the site. Boring log JACK 19986 indicates the well was drilled to 102 feet. Log JACK 55240 was for deepening of an existing well, to a depth of 182 feet. It is unclear if these logs are for the same well, or if they are

different. The static groundwater depths on the well logs ranges from 14 to 45 feet bgs. These wells were drilled to depths of 102 and 182 feet and installed in 1985 and 2002, respectively. The logs appear to indicate the wells are cased into a gray shale/claystone that lies beneath shallower coarse gravels, and well screens and water yields indicate the majority of the water from the wells comes from fractures below 100 feet bgs.

Surface water use.
The nearest surface water is Bear Creek, located approximately 450 feet to the north of the site. Stormwater onsite drains via sheet flow into on-site stormwater drains and culverts. These culverts discharge into the municipal stormwater system.

3. INVESTIGATION AND CLEANUP WORK

In 2021, a phase I site assessment identified the OWS as a potential environmental concern. The OWS is connected to a trench drain inside the maintenance area. The trench drain was filled with concrete in 2020 and is no longer in use. Additional investigations at the site were conducted between 2021 and 2023 to determine if there were environmental impacts related to the OWS. Investigations included two soil borings and temporary wells around the OWS and groundwater sampling of the onsite domestic well (Figure 2).

Two soil and water samples were obtained from the borings and analyzed for diesel and oil-range hydrocarbons (TPH-D), polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs) and metals. One water sample was collected from the domestic water well in December 2022 and analyzed for gasoline (TPH-G) and diesel-range hydrocarbons, PAHs, VOCs, total lead and various pesticides constituents.

An excavation, approximately 20 feet by 5 feet, was dug next to the OWS to confirm the results from the soil borings. The excavation was terminated at groundwater, a depth of 12.5 feet. Two soil samples were collected. Approximately 21 tons of contaminated soil were excavated from around the OWS and disposed of at Dry Creek Landfill in Eagle Point, Oregon. A complete removal of the OWS and additional impacted soil was not completed due to physical barriers at the site.

Nature and extent of contamination.
The contaminants of interest are oil-range hydrocarbons, VOCs, PAH's and metals in the vicinity of the OWS. Contaminants were detected in both soil and shallow ground water. Contaminants were not detected in water samples collected from the drinking water wells. It appears that soil contamination remains at depths of 8 to 12. 5 feet bgs in the vicinity of the OWS. Groundwater in the vicinity of the OWS is also contaminated, however it appears to be isolated to a shallow zone of groundwater and is unlikely connected to the deeper aquifer that the drinking water wells are drawing from.

4. RISK EVALUATION

Conceptual site model.
The original source of contamination was the OWS. Soil and shallow groundwater in the vicinity of the OWS are secondary sources of contamination. Pathways by which this contamination could reach human receptors include:

- Ingestion and inhalation from tapwater
- Soil ingestion, dermal contact and inhalation.

The human receptors currently likely affected are occupational. The site is zoned general commercial which includes allowances for detached single family dwellings and residential homes and daycare facilities, therefore residential receptors will be included as potential future 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	Yes	Contamination is at depth greater than 3 feet below ground surface.
		Occupational	No	No	
		Construction Worker	Yes	No	
		Excavation Worker	Yes	No	
	Volatilization to Outdoor Air	Residential and/or Urban residential	Yes	No	
		Occupational	Yes	No	
	Volatilization to Indoor Air	Residential	No	N/A	See Note *
		Commercial	No	N/A	
	Leaching to Groundwater	Residential and/or Urban residential	No	No	Site is complete paved or covered by buildings.
		Occupational	No	No	

Groundwater	Ingestion & Inhalation from Tap Water	Residential and/or Urban residential	Yes	No	
		Occupational	Yes	No	
	Vapor Intrusion into Buildings	Residential	Potential	Yes	
		Commercial	Yes	No	
	Groundwater in Excavation	Occupational	No	No	
Ecological		Terrestrial & Surface Water	No	No	

*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.

Contaminant concentrations.

Soil

Soil samples were collected at depths ranging from 8 to 12.5 feet bgs in the borings and the base of the OWS excavation. Oil-range hydrocarbons were detected in two soil samples at concentrations of 5,820 and 9,030 mg/kg which exceed the residential soil ingestion, dermal contact and inhalation RBC.

PAHs detected in soil samples were Naphthalene, Phenanthrene, Pyrene. VOCs detected were total Xylenes, 1,2,4-Trimethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, and Naphthalene. Metals detected were Arsenic, Barium, Cadmium, Chromium and Mercury. Detected concentrations of VOCs, PAHs, and metals were all below the RBCs.

Groundwater

Oil-range hydrocarbons were detected at a concentration of 14,300 µg/l exceeding the ingestion and inhalation tapwater RBCs for both residential and occupational receptors. PAHs detected in groundwater were Benzo(g,h,i)perylene, Fluoranthene, Naphthalene, Phenanthrene, Pyrene. VOCs detected were 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, total Xylenes, Acetone, n-Butylbenzene, n-Propylbenzene, and Naphthalene. Metals detected were Arsenic, Barium, Cadmium, Chromium, Lead and Mercury.

Benzene and Naphthalene were detected at a concentration of 5.80 µg/l and 22.7 µg/l, respectively. These concentrations exceed the RBCs for ingestion and inhalation from Tapwater and groundwater residential vapor intrusion. All other VOC and PAH concentrations were below the RBCs. Arsenic was detected at a concentration of 0.193 µg/l which exceeds the residential ingestion and inhalation from tapwater RBC. The concentration was below the RBC for occupational receptors.

Human health risk.

The soil conditions in the vicinity of the OWS are currently protective of human health for the current occupational use. Concentrations do not exceed RBCs for construction and excavation

workers should future site construction and excavation work occur at the site. Oil-range hydrocarbons in soil exceed the residential soil ingestion, dermal contact and inhalation RBC. However, because the contamination is at a depth greater than 3 feet the pathway is considered incomplete and is protective for this receptor.

Concentrations of oil-range hydrocarbons, benzene, naphthalene, and arsenic exceed the RBCs for ingestion and inhalation from tapwater for one or more receptors. However, these concentrations were detected in shallow groundwater grab samples in the immediate vicinity of the OWS and water wells on site are drawing water from depths of 62 feet or deeper. It is unlikely that shallow groundwater impacts extend to the deeper water-bearing zone. Therefore, this pathway is considered incomplete.

Concentrations of benzene and naphthalene exceed the groundwater residential vapor intrusion RBCs. The site has been a commercial property since 1977 and is zoned general commercial which allows for detached single family dwellings as well as residential homes and daycare facilities. The groundwater conditions in the vicinity of the OWS may not be protective for residential ground floor occupancy. Additional investigations, remediation, or special building design may be required.

Ecological risk.
The site is an active commercial facility with no ecological habitat. There is no soil contamination at the surface that could affect stormwater and surface water. There are, therefore, no unacceptable ecological risks identified for the site.

5. RECOMMENDATION

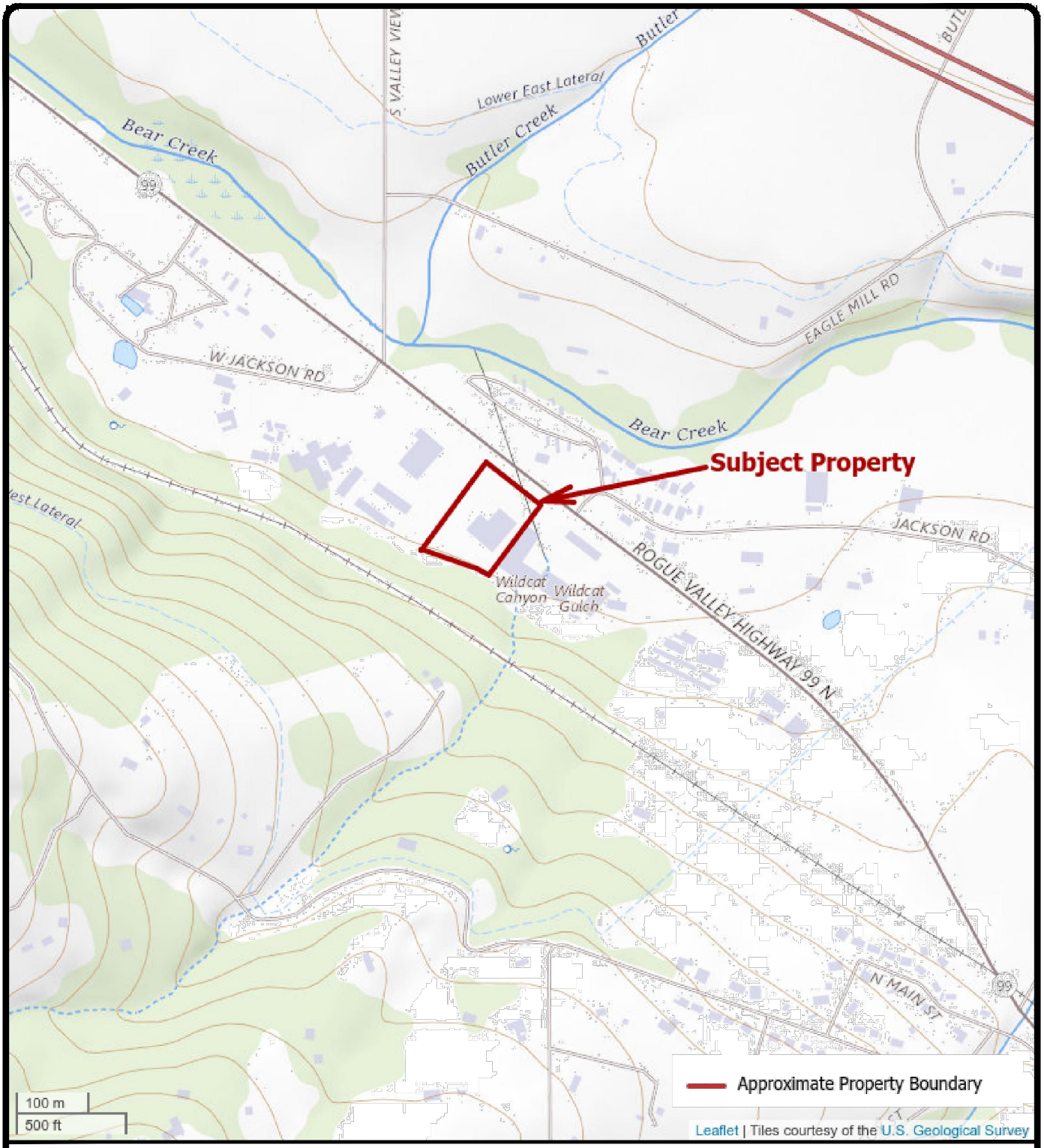
Based on sample results for soil and groundwater, acceptable risk levels are not exceeded for the current use of the site and a No Further Action determination is recommended. The No Further Action determination should be recorded in Your DEQ Online (YDO) at https://ordeq.org/6579.

6. ADMINISTRATIVE RECORD

2023-06-27_6579_Technical Memorandum

7. ATTACHMENTS

1. Site Location Map (Alpine Environmental Consultants, LLC Figure 1)
2. Site Map (Alpine Environmental Consultants, LLC Figure 2)



SOURCE: AEI Consultants, 2500 Camino Diablo, Walnut Creek, California,
AEI Project No. 445496, Figure 1: Topographic Map, Dated 9/13/2021.

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 1/3/23 DRAWN BY: MRS

Figure 1
Site Location Map
Butler Ford
1977 Highway 99 North
Ashland, Jackson County, Oregon 97520

SOURCE: AEI Consultants, 2500 Camino Diablo, Walnut Creek, California, AEI Project No. 445496, Figure 2: Site Map, Dated 9/13/2021.

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Figure 2
Site Map
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