

DEQ SITE ASSESSMENT PROGRAM - STRATEGY RECOMMENDATION

Site Name: Bingo Truck Stop (ARCO AM-PM Brooks, Pilot Travel Center #386)

Site CERCLIS Number: None

DEQ ECSI Number: 0729

Site Address: 4220 Brooklake Rd NE, Brooks Oregon 97303

Recommendation By: Eric Kelley, Site Assessment Specialist, DEQ Western Region

Approved By: Don Hanson R.G., DEQ lead worker

Date: December 16, 2015

Background

The site was developed started around 1970 as a fueling facility. The site is now a large retail fuel facility at the southwest corner of the I-5 and Brooklake Rd intersection. The site is approximately 11 acres. In 1986 the facility had a reported release of petroleum products from its underground storage tanks (USTs). DEQ opened LUST No. 24-86-4003 for this release in 1986. The release included gasoline and diesel petroleum products. The UST system is located on the northern portion of the facility, and most of the cleanup actions have occurred in this area, including removal of petroleum contaminated soils, installation of monitoring wells and a soil vapor extraction system. Monitoring of the system and petroleum impacted groundwater has taken place since August 1998 in a series of monitoring wells. The monitoring wells are screened from approximately 8 to 30 feet below ground surface.

Because of the contamination and subsequent installation of the soil vapor extraction system, the domestic well used at that time was decommissioned. A new domestic well was installed in 1996 on the southern part of the facility. This well was sampled for volatile organic compounds (VOCs) at the time of installation. No VOCs were noted above detection limits at that time. In July 2003, 1,2-dichloroethane (EDC) was detected in this drinking water well. The well was not sampled from 2003 until recently because it was classified as a State-Regulated water system and was not required to sample for VOCs. The system was reclassified as a "Non-transient Non-Community" system in September 2014 and required to sample for VOCs.

EDC was noted in the well at 1.8 micrograms per liter (ug/L) in 2003. The well was sampled

again in October 2014, February 2015, May 2015, and August 2015. The results for EDC were 2.72, 2.5, 5.8, and 2.2 ug/L respectively. Given the levels in the well it seems likely that EDC has been present in the well since at least 2003, but went un-sampled. No other VOCs were detected in the well.

According to Oregon Health Authority (OHA) and our review of the Water Supply Well Report, “The well draws water from a confined sand and gravel aquifer that occurs at a depth of nearly 90 feet below the ground. Regional groundwater flow through the area moves roughly the southwest toward the northeast.” “The well was fitted with an 8-inch diameter casing that extends to the bottom of the well. Water can enter the well through casing perforations between 126 ft and 134 ft below ground level. A bentonite seal appears to have been properly installed to a depth of 50 ft to prevent surface water and shallow groundwater from gaining access to the well bore.” The well log describes clay soils from 2 to 87 feet. EDC was not detected in the shallow groundwater during sampling of the monitoring wells at the facility. It is unlikely that EDC from a shallow on-site source on the northern part of the site would have impacted the aquifer used by the well.

The levels of EDC currently in the well are above Oregon DEQs Risk-Based concentration for *Ingestion and Inhalation from Tapwater* for occupational receptors (0.78 ug/L). The sample taken in May 2015 was above the EPA Maximum Contaminant Level of 5 ug/L.

There are other domestic drinking water wells in the area, but because they are not serving the public or a large enough volume of employees, they are not under review by the OHA. It is unclear if the EDC contamination is impacting the Bingo Truck Stop site or if the impacts are wider spread. According to the Oregon Water Resource Division database there are 62 wells logs in Township 6 South, Range 2 West, and Section 18. 38 are domestic, 13 for irrigation, six for industrial, four abandonments, and one alteration. There appears to be approximately eight drinking water wells within a ¼ mile of the site.

Potential Sources

The source or sources of the EDC contamination impacting the drinking water well is not known.

EDC has been historically released into the environment as a result of its use as a lead scavenger, grain fumigant, chemical intermediate, and extraction and cleaning solvent; improper land disposal of wastes containing EDC; and accidental EDC releases during its production. EDC was used in varnish and finish removers, in soaps and scouring compounds, in organic synthesis from extraction and cleaning purposes, in metal degreasers, in paints, coatings, and adhesives. In groundwater EDC tends to degrade slowly. EDC can be expected to exhibit low to moderate adsorption to particulates in groundwater and show high mobility in groundwater (EPA, 2006).

-Bingo Truck Stop, known now as the Pilot Travel Center operates at the site. In review of the LUST file for the site, EDC does not appear to be impacting the shallow groundwater that is being monitored on the northern portion of the site. However, there was a “Truck Wash” reportedly located on the southern portion of the facility, which may have used cleaners or degreasers containing EDC. The Pilot Travel Center is also a listed as a conditionally exempt hazwaste facility in 2007.

-McCoy Freightliner, located at 4060 Interstate Pl NE, Brooks Oregon. McCoy Freightliner is the property is adjacent to the Bingo Truck Stop site on the south west side. McCoy Freightliner is a commercial facility that sales and repairs Freightliner Semi Trucks. They may have used cleaners, degreasers, paints, or adhesives containing EDC.

-Esley Truck Accessories, located at 8983 Truckman Way NE, Brooks Oregon. This facility is adjacent to the west of the site. Esley Truck Accessories sell semi truck accessories, including cleaners and polishers, which may contain EDC.

-Adell Machine and Repair, located at 8920 Huff Ave NE, Brooks, Oregon. This facility is west of the site and adjacent to Esley Truck Repair. This is a machine and repair shop, which may have used products containing EDC.

-Willamette Fluid Power, located at 8900 Huff Ave NE, Brooks, Oregon. This facility is west of the site. This facility sells and repairs hydraulic components, which may contain EDC.

-Terra Electric Construction Inc, located at 8810 Huff Ave NE, Brooks, Oregon. This facility is west of the site. This facility specializes in exterior work, water pressure problems, and farms.

-Automated Batting Cages, Inc, located at 8811 Huff Ave NE, Brooks, Oregon. This facility is west of the site. This facility manufactures baseball and softball batting range equipment for commercial use batting range installations. This facility had a Leaking Underground Storage Tank file with DEQ. The file was given a No Further Action in 1994. No samples were taken for EDC at this site.

-Dallwig Brothers Building Supply Inc, located at 8891 Huff Ave NE, Brooks, Oregon. This facility is west of the site. This facility sales and distributes drywall and roofing supplies. This facility had a Leaking Underground Storage Tank file with DEQ. The file was given a No Further Action in 2002. No samples were taken for EDC at the site.

-May Trucking Company, located at 4185 Brooklake Rd NE, Brooks, Oregon. This facility is located north the site. This facility provides transportation services. This site has a Leaking Underground Storage Tank file with DEQ. The file is currently open. It is unknown if EDC has been sampled at the site. This facility was also a small quantity hazwaste generator in 1991, 1992, and 1995, disposing of paint waste, cleaning liquid and halogenated solvents. They are now classified as a conditionally exempt generator.

-The areas to the south of the site are agricultural. EDC is noted as being used as a grain, household, and soil fumigant, some of which may have been used on these agricultural properties.

Based on the construction of the on-site domestic well, the site geology, and the lack of shallow contamination at the shallow groundwater monitoring wells, DEQ believes that the EDC contamination is most likely from an off-site (upgradient) source, migrating in the more permeable sand and gravel aquifer.

Pathway Summary

The *Ingestion and Inhalation from Tap water* pathway is considered complete at the site because groundwater at the site is contaminated and being used for drinking water. Groundwater may also be used by other properties in the vicinity of the site, and it is not known if the contamination extends off site. The extent of EDC contamination at the site is not known. If there is a source of EDC on site or on a nearby site, it is possible that soil and shallow groundwater are impacted. If they are impacted, it is possible that *vapor intrusion to indoor air* and *volatilization to out-door air* from soil and groundwater could be complete pathways.

Recommendation/Action

DEQ has ranked the site as a high priority for additional action. Based on the limited information known about the contamination at the site, the following actions are recommended:

- The well water at the site should be treated to remove or reduce EDC contamination to below protective levels.
- A door to door beneficial groundwater use survey of the businesses around the site should be conducted to try and determine if groundwater is being used in the immediate vicinity of the site.
- Domestic wells within in the vicinity of the site should be sampled, if possible, to determine if they are affected by VOCs, in coordination with the beneficial groundwater use survey.
- The deeper groundwater aquifer should be further evaluated, using the results from the VOC sampling at nearby drinking water wells, to help determine the extent of contamination, the direction of migration of the plume, and possible sources of the contamination.

References

The Site Assessment Section has reviewed the following references in the preparation of this strategy recommendation:

- Oregon Health Authority, August 2015. "Preliminary Assessment of Known Public Water Supply Contamination above the SDWA Maximum Contaminant Level; Public Water System # 4105963, Pilot Travel Center #386"
- EPA, May 2006. "Lead Scavengers Compendium: Overview of Properties, Occurrence, and Remedial Technologies."

Attachments;

- Figure 1; Site Figure
- Figure 2, Site Diagram showing site and adjacent properties
- Figure 3; Drinking water source area from OHA



Antique Powerland

Pacific Northwest
Truck Museum

May Trucking Company

ke Rd NE

Brooklake Rd NE

Brooklake Rd NE

Brooklake Rd NE

Shotz

AMC Fleet Services

Chalet Restaurant
& Bakery

Pilot Fuel

Taco Bell

Esley Truck Accessories

Dallwig Brothers
Building Supply

Huff Ave NE

Anderson Airfield

McCoy Freightliner

Automated Batting Cages

Pilot Travel Center Well

Interstate PI NE

Google



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Fluid Power

Huff Ave NE

Anderson Airfield

McCoy Freightliner

Automated Batting Cages

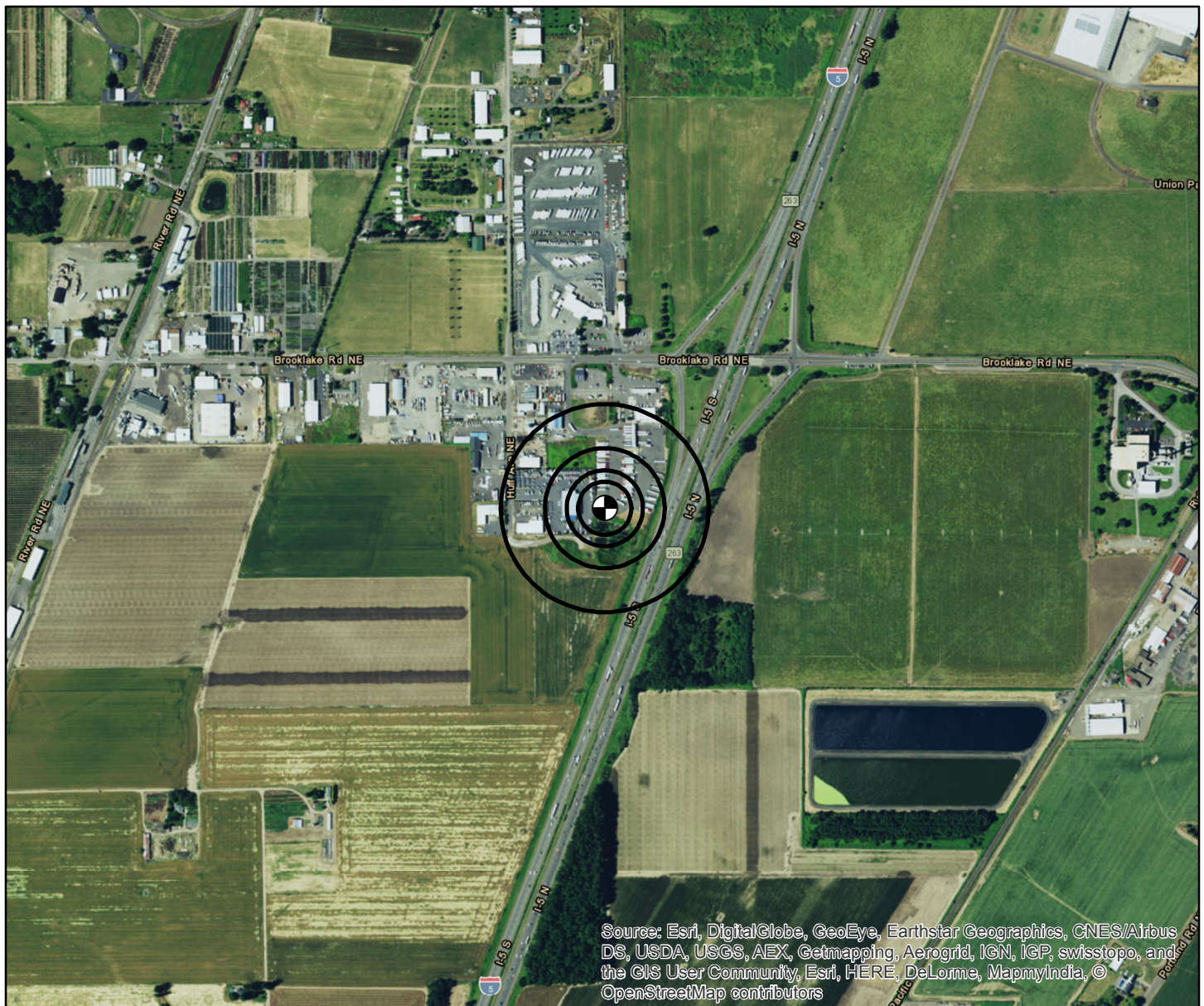
Pilot Travel Center Well

Interstate 5

Terra Electric
Constructors

Google

Figure 1. Pilot Travel Center #386 Drinking Water Source Area



0 500 1,000 2,000 3,000 4,000 Feet

Scale 1: 12,000

Drinking Water Source Area (DWSA)
1, 2, 5, and 15 Year Time-of-Travel (TOT) zones
Calculated Fixed Radius Method

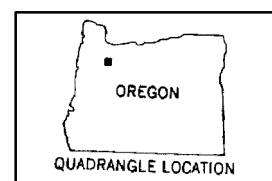
Model Parameters:

Production Interval (ft): 21.6
Effective Porosity: 0.25
Usage (gal/day): 12,500

Well Location (WGS84 Datum):

Marion County
T. 6 S., R. 2 W., Sec. 18
Lat. 44° 02' 49.6" N
Long. 122° 58' 33.5" W

Prepared by: Tom Pattee, RG# G-1874
Date: 07/22/2015
PWS #: 4105963



USGS Gervais, OR Quadrangle (Part Section), 7.5' Series (Topographic)

SITE ASSESSMENT PRIORITIZATION SYSTEM (SAPS) - SCORESHEET

(To be used with SAPS Guidance & Worksheet Version #6, December 2003)

Site Name: Bingo Truck Stop (AKA ARCO AM-PM Brooks, Pilot Travel Center #386)

Site Address: 4220 Brooklake Rd NE, Brooks Oregon 97303

ECSI Number:0729

EPA ID Number:NA

Site Evaluator: Eric Kelley

Date: December 16, 2015

	<u>HIGH THREAT</u>	<u>MEDIUM THREAT</u>	<u>LOW THREAT</u>	<u>NO THREAT</u>	<u>CONF. VALUE</u>
1. Contaminant Route Characteristics and Potential to Release					
a. Hazardous Substance Containment	9	5	3	0	5B_
b. Depth To Aquifer	7	4	2	0	7A_
c. Distance to DW Well	7	4	2	0	7A_
d. Soil Permeability	3	2	1	0	2B_
e. Distance to Surface Water	7	4	2	0	2B_
2. Hazardous Substance Characteristics					
a. Source Quantity	9	5	3	0	9B_
b. Toxicity/Persistence	9	5	3	0	9B_
c. Water Solubility	3	2	1	0	3A_
3. Exposure Potential					
a. Groundwater Use	9	5	3	0	9A_
b. Land Use/Population	7	4	2	0	4A_
c. Surface Water Use	9	5	3	0	5B_
d. Sensitive Environments	7	4	2	0	4B_
e. T&E Species and Critical Habitats	7	4	2	0	2B_
f. Likelihood of Human Exposure	10	6	2	0	10A_
4. Evaluator Assessment of Threat	10	5	1	0	10_

Add the circled numbers to get the total SAPS score.

Total SAPS score = 88 (out of 113 possible points)

Raw priority associated with score = H (H, M, L)

HIGH: 86 or above

MED: 48 – 85

LOW: 47 or less (where further site action is needed)

DISCUSSION

The drinking water well at the former Bingo Truck Stop has been impacted by 1,2-dichlorethane (EDC) at levels above DEQ risk based concentrations for *Ingestion and Inhalation from Tap water* for occupational users and above EPA maximum contaminant levels for drinking water(May 2015 sample). This water is used for transient visitors to the site, showers at the facility, and food preparation.

FINAL PRIORITY ASSIGNMENT

- ☒ Further Action - High Priority
- ☐ Further Action - Medium Priority
- ☐ Further Action - Low Priority
- ☐ No Further Action
- ☐ Refer to _____ for further consideration
- ☐ Other: _____

LISTING RECOMMENDATION

- ☐ Recommend proposal for Confirmed Release List
- ☐ Recommend proposal for Inventory
- ☐ Insufficient information to list on the Confirmed Release List
- ☐ Insufficient information to list on the Inventory
- ☐ Excluded from listing