

SITE HAZARD ASSESSMENT
WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Gradens Camp Union Grocery
14174 NW Holly Rd
Seabeck, Kitsap County, WA 98380

Section/Township/Range: 2/24N/1W
Latitude: 47.593741
Longitude: -122.84068
Ecology Facility Site ID No.: 59537676
Parcel # 052401-3-004-1004

Site scored/ranked for the February 2013 Hazardous Sites List update
January 31, 2013

SITE DESCRIPTION:

The Gradens Camp Union Grocery (Gradens) site is located in the Seabeck area of rural Kitsap County, WA. Seabeck, WA is an unincorporated area of Kitsap County on Hoods Canal approximately 24 miles directly west of Seattle, WA. The Gradens site is located on the north side of NW Holly Rd approximately 0.1 mile from the intersection with Coho Run NW. The site contains three buildings and a gas station island with a canopy. There are four businesses at the site located in the three buildings. They are the Camp Union Pizzeria, Camp Union Grocery (convenience store and gas station), Arrowhead Realty, and Camp Union Saloon (restaurant). The property is 3.81 flat acres. The area is rural residential. See the attached map for property features.

The current owner of the property is:

Serizon No. 1 LLC.
Kwangsik Yi
14174 NW Holly Rd
Seabeck, WA 98380

Previous Studies/History of contamination

The Gradens site was reported to Ecology in May of 2011 as a result of a Phase II Environmental Site Assessment (Phase II) conducted by ENCON Solutions, Inc. The Phase II investigation found petroleum contaminated soils (PCS) in the area where two old underground storage tanks (USTs) from the 1950s had been located west of the gas pump island. These USTs had been removed sometime around 1990. No documentation of the removal of these tanks could be found. Sometime between 1989 and 1991, four new USTs were installed east of the gas pump island.

The Phase II investigation found Total Petroleum Hydrocarbons (TPH) – gasoline extended range (Gx), benzene, ethylbenzene, toluene, and xylenes (BTEX) in soil and ground water above applicable

Model Toxics Control Act (MTCA) levels. The contaminants were found in three of six borings between 12 and 16 ft below ground surface (bgs) in the area of the old tanks west of the island. Sampling in the area of the new tank field located east of the island did not detect TPH-Gx, diesel extended range (Dx), and BTEX above the detection limit. This site was added to the Confirmed and Suspected Contaminated Sites list in October of 2012 after the Phase II and an Initial Investigation by Ecology staff.

In June of 2011 additional sampling was conducted of the old tank area. The sampling was conducted by Robert Rodman and confirmed the location of the PCS in the old tank area and that the PCS was in exceedance of MTCA. No new contaminants were found in this round of sampling.

In November of 2011 GeoConsulting, Inc. authored a report titled "Petroleum Contaminated Soil Excavation Report, Graden's Camp Union, 14174 NW Holly Rd, Seabeck, WA." This report discussed the excavation and removal of 325 tons of PCS from the site and sampling of the excavation pit for petroleum products. The report and the sample results indicate that PCS in excess of MTCA Standards was left at the site. See table 1 below for sample results in exceedance of MTCA.

Table 1. Soil sampling results (mg/kg)

Sample ID	TPH-Gx	MTBE ¹	Benzene	Toluene	Ethylbenzene	Xylenes	Dichloroethane, 1,2
EXC-S1	<3.0	<0.10	<0.030	<0.050	0.072	0.30	22 ²
EXC-S2	7500	<10	<3.0	74	130	770	47
EXC-S4	2600	<5.0	<1.5	9.1	23	0.79	<10
EXC-S5	4400	<10	<3.0	15	52	160	15
MTCA Stnd ³	30	0.1	0.03	7	6	9	11

The results presented in Table 1 do not include all of the soil results on record, only those results where one of the analytes exceeded MTCA after the removal of PCS. PCS apparently was left in the ground because the contamination extended below the gas pump island to the east, and the pizzeria building to the north. The excavation was limited to 12' deep because of limitations of the excavator.

No ground water sampling data was available in the record from after the removal of the 325 tons of soil by GeoConsulting.

Potential Sources of Contamination

The likely sources of the contamination were the former underground storage tanks at the site. Reports assert the old USTs were removed when the new grocery store was built around 1990.

Drinking Water Wells

Drinking water wells within two miles of the site include Group A, Group B, and private well systems which serve a total of 1918 or more persons. Local drinking water wells surround the site with the

¹ Methyl Tertiary-Butyl Ether

² Shaded value indicates exceedance of applicable MTCA Standard

³ Model Toxics Control Act- Method A Cleanup Levels for Soil (Table 740-1) or Method B Carcinogen for soil.

closest well being approximately 431 feet from the site. Approximately 190 wells are noted within two miles of the site. The gas station/grocery, the real estate office, the pizzeria, and the restaurant are served by a Group A water system on the same property as the contamination. This well is approximately 240 feet from the area of contamination and screened at 110'.

Site Inspection

A site inspection was conducted on January 30, 2013, by Health District Staff. The site inspection confirmed the physical aspects of the properties and gave staff some familiarity with the site and surrounding area.

SPECIAL CONSIDERATIONS (include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

1) Since the significant contamination documented onsite is primarily subsurface, the surface water and air routes are not applicable for Washington Ranking Method scoring for this site. Thus, only the groundwater route will be scored.

ROUTE SCORES:

Surface Water/Human Health:	<u>NS</u>	Surface Water/Environmental:	<u>NS</u>
Air/Human Health:	<u>NS</u>	Air/Environmental:	<u>NS</u>
Groundwater/Human Health:	<u>47.6</u>		

OVERALL RANK: 3

WORKSHEET 2
Route Documentation

1. **SURFACE WATER ROUTE** – *Not Scored*

- a. List those substances to be considered for scoring: Source:
- b. Explain basis for choice of substance(s) to be used in scoring.
- c. List those management units to be considered for scoring: Source:
- d. Explain basis for choice of unit to be used in scoring:

2. **AIR ROUTE** – *Not Scored*

- a. List those substances to be considered for scoring: Source:
- b. Explain basis for choice of substance(s) to be used in scoring:
- c. List those management units to be considered for scoring: Source:
- d. Explain basis for choice of unit to be used in scoring:

3. **GROUNDWATER ROUTE**

- a. List those substances to be considered for scoring: Source: 1, 2, 3
TPH –gasoline and Dichloroethane, 1,2
- b. Explain basis for choice of substance(s) to be used in scoring:
These substances were detected in groundwater at the site in concentrations exceeding their respective MTCA cleanup levels.
- c. List those management units to be considered for scoring: Source: 1, 2, 3
Groundwater
- d. Explain basis for choice of unit to be used in scoring:
The contaminating substances were detected in groundwater samples. TPH-gasoline and Dichloroethane, 1,2 were found in concentrations exceeding MTCA cleanup levels.

WORKSHEET 6
Groundwater Route

1.0 SUBSTANCE CHARACTERISTICS

1.2 Human Toxicity										
Substance		Drinking Water Standard (µg/L)	Value	Acute Toxicity (mg/ kg-bw)	Value	Chronic Toxicity (mg/kg/day)	Value	Carcinogenicity		Value
								WOE	PF*	
1	TPH – Gasoline	5	8	3306	3	--	ND	A	.029	5
2	Dichloroethane, 1,2	5	8	670	3	ND	--	--	--	ND

* *Potency Factor*

Source: 1,2,3,4,6,7

Highest Value: 8

(Max = 10)

Plus 2 Bonus Points? 2

Final Toxicity Value: 10

(Max = 12)

1.2 Mobility (use numbers to refer to above listed substances)		
Cations/Anions	OR	Solubility (mg/L)
1=		1= $1.8 \times 10^3 = 3$
2=		2= $8.5 \times 10^3 = 3$

Source: 1,2,3,4,6,7

Value: 3

(Max = 3)

1.3 Substance Quantity:	
Explain basis: Unknown, use default = 1 : Unknown quantity of contaminated groundwater = 1	<p>Source: <u>1,2,3,4,6,7</u></p> <p>Value: 1</p> <p>(Max=10)</p>

2.0 MIGRATION POTENTIAL

	Source	Value
2.1 Containment (explain basis): LUST	1,2,3,4,5	10 (Max = 10)
2.2 Net precipitation: 29.7"-5.6"= 24.1"	9	3 (Max = 5)

2.3	Subsurface hydraulic conductivity: Sand, Gravel= Hydraulic Conductivity of $>10^{-3}$ cm/sec	6,7, 11	4 (Max = 4)
2.4	Vertical depth to groundwater: Approximately 25'	1	6 (Max = 8)

3.0 TARGETS

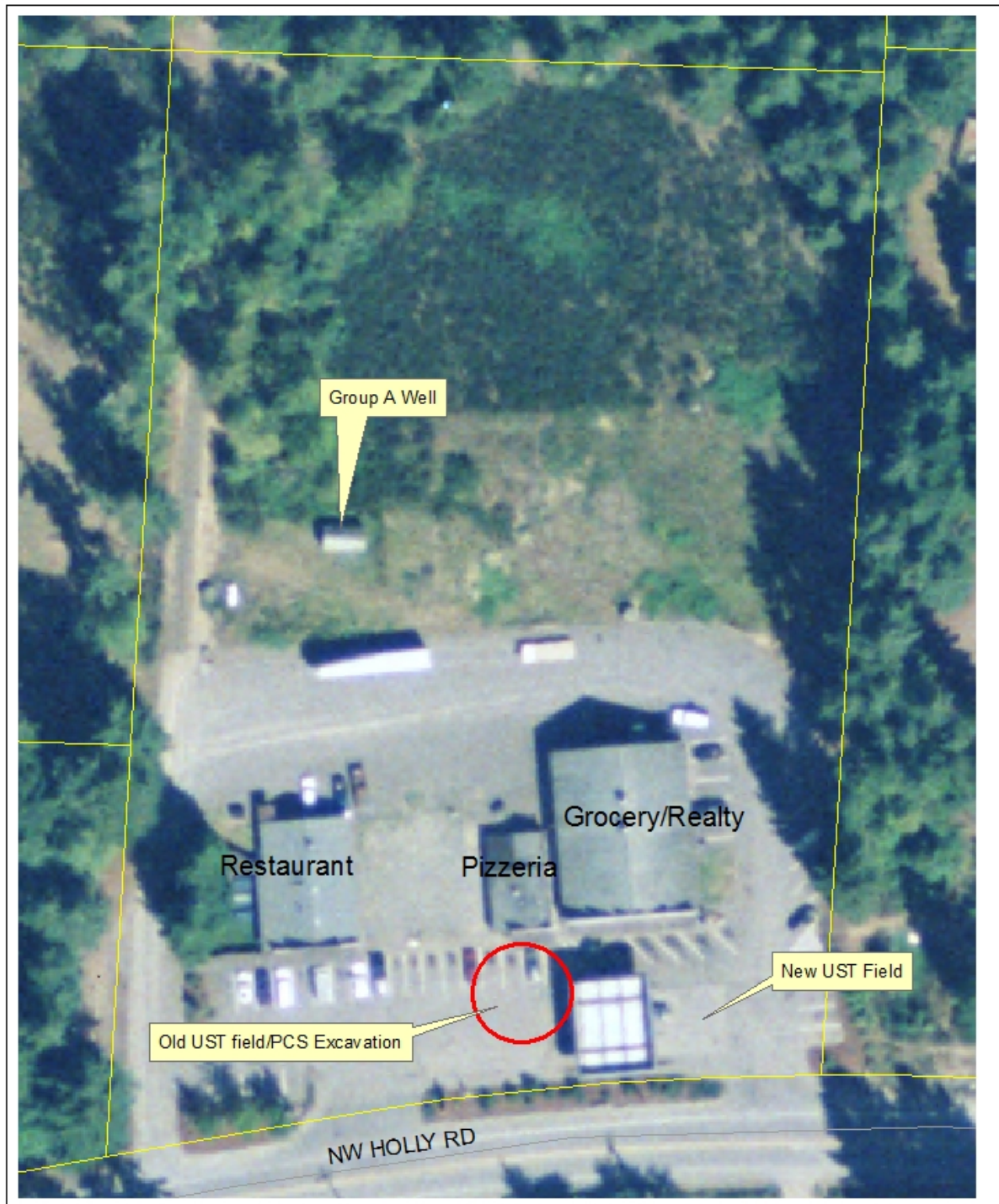
		Source	Value
3.1	Groundwater usage: Public supply, alternate sources available	3,4,5,6,9,10	4 (Max = 10)
3.2	Distance to nearest drinking water well: <u>240</u> feet	3,4,5,6,9,10	5 (Max = 5)
3.3	Population served within 2 miles: approx 1849 = 43	3,4,5,9,10	43 (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: none	3,4,5,9,10	0 (Max = 50)

4.0 RELEASE

	Source	Value
Explain basis for scoring a release to groundwater: Confirmed release.	1,2,3,4	5 (Max = 5)

SOURCES USED IN SCORING

1. Phase II Environmental Site Assessment -14174 NW Holly Rd, Seabeck, WA, 98380, ENCON Solutions, Inc, May 31, 2011
2. Analytical Results for Graden's Camp Union Grocery & Texaco – 14174 NW Holly Rd, Seabeck, WA 98380, Robert M. Rodman, June 2011.
3. Initial Investigation Field Report – ERTS # 626957 – Graden's Camp Union, Brenda Yager, Washington State Department of Ecology, August 25, 2011.
4. Petroleum Contaminated Soil Excavation Report- Graden's Camp Union – 14174 NW Holly Rd, Seabeck, WA 98380, GeoConsulting, Inc., November 4, 2011.
5. Site Hazard Assessment Site Visit, Grant Holdcroft, Kitsap Public Health District, January 30, 2013.
6. Graphic Information Systems – ArcMap/ArcCatalog, Kitsap Public Health District GeoDatabases, Data from Kitsap County GIS & Washington State Department of Ecology, January 2013.
7. Toxicology Database for Use in Washington Ranking Method Scoring, Washington State Department of Ecology, January 1992
8. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
9. Washington Climate – Net Rainfall Table
10. Washington State Department of Health, Sentry Database for public water supplies.
11. Soil Survey of Kitsap County, Washington, US Department of Agriculture, 1980



Gradens Camp
Union Grocery

0 10 20 30 40
Feet

