WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:
Name: Oak Harbor Freight Terminal
Address: 290 East Penny Rd.
City: Wenatchee County: Chelan State: WA Zip: 98801
Section/Township/Range: T23N R20E S21
Latitude: 47° 27' 57.7" Longitude: 120° 19' 55.4"
Facility Site ID #: ~~4267507~~ 3014217

Site scored/ranked for the February 2010 update

Site Description and Historical Background

The subject site is in a commercial zone at the north end of Wenatchee, located about 2500 feet west of the Columbia River. Prior to commercial use it was used for agriculture, primarily orchards. The orchards were removed in the early 1990's. It is likely the property was in orchard during the time lead and arsenic pesticides were in common use. The 1.95 acre property is currently covered in impervious surfaces and buildings. Drinking water is supplied by the Wenatchee public water system from wells located about seven miles north near Rocky Reach dam.

Soil Sampling and Analytical Results

In April, 2004 Tetra Tech Inc. (TTI) was commissioned to perform limited Phase II soil sampling at the site of a proposed cellular monopole on the Oak Harbor site. A total of six soil samples were collected for analysis of organochloride pesticides and the metals lead (Pb), arsenic (As) and mercury (Hg). Five of the samples were collected from the 0-1 ft. depth; a sixth sample was collected from the 0-3 ft. depth. The location of the sample points was selected based on the location of excavation required for the monopole construction. All samples were sent to Onsite Environmental, Inc. of Redmond, WA for analysis.

Of the six soil samples analyzed for Pb and As, concentrations exceeded Model Toxics Control Act (MTCA) Method A cleanup levels for Unrestricted Land Use for As (20 mg/kg) in five of the samples. Concentrations exceeded MTCA Method A cleanup levels for Unrestricted Land Use for Pb (250 mg/kg) in two of the samples. The highest Pb concentration was 710 mg/kg, while the highest As concentration was 95 mg/kg. Organochloride pesticides were detected in five of the samples at levels well below the MTCA level A cleanup levels. Mercury was not detected in any of the samples.

Special Considerations:

Because the remaining contamination is entirely subsurface and the property is covered with pavement, the surface water and air routes are not applicable for WARM scoring. Thus, only the groundwater route will be scored.

ROUTE SCORES:

Surface Water/Human Health:	**NS**	Surface Water/Environmental.:	**NS**
Air/Human Health:	**NS**	Air/Environmental:	**NS**
Groundwater/Human Health:	**17**		

Overall Rank: **5**

Worksheet 2

Route Documentation

GROUNDWATER ROUTE

a. List those substances to be considered for scoring: Source: 1

Arsenic, lead.

b. Explain basis for choice of substance(s) to be used in scoring:

Soil sample analysis—As was found above MTCA Level A

Pb was found above MTCA level A.

c. List those management units to be considered for scoring: Source: 1

Contaminated subsurface soils.

d. Explain basis for choice of unit to be used in scoring:

As and Pb contamination confirmed by laboratory testing.

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	Arsenic	10	8	763(rat)	5	0.001	5	A	1.75	7
2	Lead	5	8	ND	--	<0.001	10	B2	ND	--
3										
4										
5										
6										

* *Potency Factor*

Source: 1,5,6
Highest Value: 10
(Max = 10)
Plus 2 Bonus Points? 2
Final Toxicity Value: 12
(Max = 12)

1.2 Mobility (use numbers to refer to above listed substances)

Cations/Anions	OR	Solubility (mg/L)
1= 3		1=
2= 2		2=
3=		3=
4=		4=

Source: 1,6
Value: 3
(Max = 3)

1.3 Substance Quantity:

Explain basis:

1.95 acres X 43,560 sq ft/acres/9 = 9438 cu yds

Source: 1,6
Value: 5
(Max=10)

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	**Containment (explain basis):** Contaminated soil, asphalt cap, no liner, no leachate collection	1,6	**5** (Max = 10)
2.2	**Net precipitation:** 5.7 minus 3.0 = 2.7 inches	7	**1** (Max = 5)
2.3	**Subsurface hydraulic conductivity:** silty sand	2,6	**3** (Max = 4)
2.4	**Vertical depth to groundwater:** <25-50 feet	3,6	**6** (Max = 8)

3.0 TARGETS

		Source	Value
3.1	**Groundwater usage:** Public supply, no alternate sources available	3,6,9	**9** (Max = 10)
3.2	**Distance to nearest drinking water well:** 5000-10,000 **feet**	3	**1** (Max = 5)
3.3	**Population served within 2 miles:** public water source >2 miles away	8,9	**0** (Max = 100)
3.4	**Area irrigated by (groundwater) wells within 2 miles:** (0.75)*√ 241 acres = 11.6	6,8	**12** (Max = 50)

4.0 RELEASE

	Source	Value
Explain basis for scoring a release to groundwater: No documentation	1,6	**0** (Max = 5)

SOURCES USED IN SCORING

1. Tetra-Tech, Inc. report dated April 26, 2004.
2. Soil logs on file at Chelan-Douglas Health District.
3. Washington Department of Ecology well log website (http://apps.ecy.wa.gov/wellog)
5. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
6. Washington Department of Ecology, WARM Scoring Manual, April 1992.
7. Washington Climate – Net Rainfall (Table 27)
8. Water Rights Application Tracking System (WRATS) printout for two-mile radius of site.
9. Washington State Department of Health, SENTRY Database printout for public water supplies
10. Site visit on November 6, 2009

Oak Harbor Freight office and parking lot November 6, 2009