



WORKSHEET 1  
Summary Score Sheet

**SITE INFORMATION:**

Name: Chelan County Fire District No. 1  
Address: ~~206 Easy Street~~ ~~428 West 7th Avenue (Site)~~ 206 Easy Street is the site address  
City: Wenatchee County: Chelan State: WA Zip: 98801  
Section 21 / Township 23N / Range: 20E  
Latitude: 47 deg 28.233 min N Longitude: 120 deg 20.117 min W  
F.S. ID #: 53265234- ~~2471875~~ correct FS# 53265234

*Site scored/ranked for the August 22, 2007 update*

**SITE DESCRIPTION (management areas, substances of concern, and quantities):**

The Chelan County Fire District No. 1 site is located in a commercial area in the north end of Wenatchee approximately 4000 feet north of the Wenatchee River, 3400 feet west of the Columbia River, with an approximate elevation of 720 feet above sea level. The facility formerly consisted of a county operated fire station, sheriff's helicopter hanger, a fire tower, and a county yard. The helicopter hanger is no longer in use. The site topography slopes moderately southeast toward the Columbia River. A few wells are located within two miles of the site, but public drinking water wells are located more than five miles to the north near Rocky Reach dam.

On January 20-21, 1995 Michael's Irrigation and Excavation (MIE) decommissioned and removed two underground storage tanks (UST's) from the Fire District site. The UST's consisted of one 500-gallon diesel tank and one 1000-gallon gasoline tank. Sage Earth Sciences, Inc. (Sage) was contracted to provide field screening and soil sampling upon removal of the UST's. A visual inspection of the tanks found them to be in good condition with no observable holes.

Sage collected eight soil samples during the initial tank excavation from the excavation sidewalls, below the UST's and beneath the dispenser island location. The samples were sent to Materials Testing and Consulting, Inc. (MTC) in Burlington, WA. for analysis of Total Petroleum Hydrocarbons-Diesel (TPH-D), Total Petroleum Hydrocarbons-Gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylene (BTEX). None of these sample results exceeded the present MTCA (Model Toxics Control Act) Method A cleanup levels for the parameters tested. However, one of the samples taken near the dispenser had a concentration of 1500 mg/kg TPH-D, which exceeded the Method A cleanup level in existence in 1995 (200 mg/kg).

Based upon field screening results using a flame ionization detector, MIE excavated soil from the area of the fuel dispenser in addition to soil excavated from the UST area for a total of approximately 60 cubic yards. Complete excavation of the potentially impacted soil was not accomplished since additional soil removal would have endangered the fire tower structure. Upon completion of remedial activities MIE filled the remedial excavation with imported soil. Three soil samples from the stockpiled excavated soil were analyzed for diesel and gasoline range hydrocarbons. One of the samples had 5300 mg/kg TPH-D, which exceeds the MTCA Method A cleanup level of 2000 mg/kg.

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All other parameters were below MTCA Method A cleanup levels. The stockpiled soil was completely removed from the site and disposed at the Greater Wenatchee Regional Landfill.

Sage collected six additional soil samples to characterize the final remedial excavation. The samples were analyzed by MTC for gasoline and diesel range hydrocarbons. Only one sample exceeded the MTCA Method A cleanup level for TPH-D, with a result of 3500 mg/kg. There were no detectable gasoline range hydrocarbons (TPH-G) in any of these samples. Sage recommended establishing a soil boring at the base of the fire tower to determine the vertical extent of diesel impacted soil.

There was nothing in the Washington Department of Ecology (Ecology) site files to indicate further assessment and/or remediation has occurred at this site since it was listed on Ecology's Confirmed and Suspected Contaminated Sites List, with a site status of Awaiting Site Hazard Assessment, on January 25, 2006.

A site visit was made on May 14, 2007 to take photos and GPS readings. It was confirmed that the site was almost completely paved with concrete.

**Special Considerations:**

Because the entire site is covered with asphalt, and a significant amount of the remaining contamination is entirely subsurface, 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:	<u>NS</u>	Surface Water/Environmental.:	<u>NS</u>
Air/Human Health:	<u>NS</u>	Air/Environmental:	<u>NS</u>
Groundwater/Human Health:	<u>8.4</u>		

**Overall Rank:** 5

WORKSHEET 2  
Route Documentation

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

2. **AIR ROUTE** – *Not Scored*

3. **GROUNDWATER ROUTE**

- a. List those substances to be considered for scoring: Source: 1  
Diesel
- b. Explain basis for choice of substance(s) to be used in scoring:  
The SEACOR report contained results showing that diesel was present Source:1  
in the soil at concentrations that exceeded MTCA Method A cleanup levels.
- c. List those management units to be considered for scoring: Source: 1  
Contaminated soil
- d. Explain basis for choice of unit to be used in scoring: Source: 1  
Diesel contamination was confirmed by laboratory testing.

WORKSHEET 6  
Groundwater Route

**1.0 SUBSTANCE CHARACTERISTICS**

<b>1.2 Human Toxicity</b>										
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-diesel	160	4	490	5	0.004	3	ND	ND	
2										
3										
4										
5										
6										

\* Potency Factor

Source: 1,4,5

**Highest Value: 5**

(Max = 10)

**Plus 2 Bonus Points? 0**

**Final Toxicity Value: 5**

(Max = 12)

<b>1.2 Mobility (use numbers to refer to above listed substances)</b>	
Cations/Anions	OR Solubility (mg/L)
1=	1= 30 (=1)
2=	2=
3=	3=
4=	4=

Source: 1,4,5

**Value: 1**

(Max = 3)

<b>1.3 Substance Quantity:</b>	
Explain basis: Unknown                      Default = 1	Source: <u>5</u> <b>Value: <u>1</u></b> (Max=10)

**2.0 MIGRATION POTENTIAL**

		<b>Source</b>	<b>Value</b>
<b>2.1</b>	<b>Containment (explain basis):</b> Contaminated area of the site is capped, score as landfill Low permeability cover = 1, no liner = 3, no leachate collection = 2	1,5	<b>6</b> (Max = 10)
<b>2.2</b>	<b>Net precipitation:</b> 5.7 minus 3.0 = 2.7 inches	6	<b>1</b> (Max = 5)
<b>2.3</b>	<b>Subsurface hydraulic conductivity:</b> silty clay	2,5	<b>2</b> (Max = 4)
<b>2.4</b>	<b>Vertical depth to groundwater:</b> 50 to 100 feet	3,5	<b>4</b> (Max = 8)

**3.0 TARGETS**

		<b>Source</b>	<b>Value</b>
<b>3.1</b>	<b>Groundwater usage: public supply; no alternate unthreatened sources available with minimal hookups</b>	5,7	<b>9</b> (Max = 10)
<b>3.2</b>	<b>Distance to nearest drinking water well:</b> <u>~2500</u> feet	5,8	<b>3</b> (Max = 5)
<b>3.3</b>	<b>Population served within 2 miles:</b> $\sqrt{\text{pop.}} = \sqrt{78} = 8.8$	5,7	<b>9</b> (Max = 100)
<b>3.4</b>	<b>Area irrigated by (groundwater) wells within 2 miles:</b> $(0.75) * \sqrt{262} \text{ acres} = \underline{12.1}$	5,7	<b>12</b> (Max = 50)

**4.0 RELEASE**

		<b>Source</b>	<b>Value</b>
	<b>Explain basis for scoring a release to groundwater:</b> Release not confirmed.	1,5	<b>0</b> (Max = 5)

### SOURCES USED IN SCORING

1. Sage Earth Sciences, Inc. report dated May 30, 1995.
2. Soil Survey of Chelan County, Washington (USDA).
3. Water well reports on file at Chelan-Douglas Health District
4. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
5. Washington Department of Ecology, WARM Scoring Manual, April 1992.
6. Washington Climate – Net Rainfall Table
7. Water Rights Application Tracking System (WRATS) printout for two-mile radius of site.
8. Washington Department of Ecology Well Log Image system
9. Site visit on May 14, 2007 by Chelan-Douglas Health District.



South view of Chelan County Fire District parking lot



Northwest corner of Fire District property