

WORKSHEET 1  
Summary Score Sheet

**SITE INFORMATION:**

Name: Keyes Fiber Corporation  
Address: 3715 Chelan Highway  
City: Wenatchee County: Chelan State: WA Zip: 98801  
Section 15 / Township 23N / Range: 20E  
Latitude: 47 deg 29 min 7.1s N Longitude: 120 deg 19 min 4.1 s W

F.S. ID #: 85479678

*Site scored/ranked for the August, 2010 update*

February 18, 2010

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

Keyes Fiber Wenatchee Plant, located north of Wenatchee on the east side of the Chelan Highway, processes used paper and manufactures it into packing trays for apples and other fruit. Prior to a plant modernization an environmental assessment was conducted, which revealed the presence of a significant amount of oily-stained soil.

In January, 1991 CH2M Hill Northwest was commissioned to conduct a preliminary sampling and analysis program to characterize the visibly stained soils with respect to the disposal criteria of the Greater Wenatchee Regional Landfill. The samples were sent to the CH2M laboratory in Redding California where they were tested for Total Petroleum Hydrocarbons-Diesel (TPH-D), Polychlorinated biphenyls (PCB's) and Toxic Cleanup Leaching Procedure (TCLP) metals. Of the parameters tested, only TPH-D exceeded Model Toxics Control Act (MTCA) Level A limits.

In April, 1991 an additional nine soil samples were collected and analyzed for TPH-D, TCLP metals, PCBs, Benzene, Toluene, Ethylbenzene and Xylene (BTEX). Results for TPH-D exceeded the MTCA Level A limit of 2000 mg/l, while all other results were either non-detect or below MTCA Level A limits.

In May, 2001 additional sampling was done to further delineate the extent of the oily soils. A total of 69 soil samples were collected from twenty soil borings to depths between two and thirty feet below ground surface (bgs). The samples were analyzed for TPH-D at on onsite laboratory using USEPA Method 418.1. Five of the samples exceeded MTCA Level A limits, with the highest value being 11,100 mg/kg.

In 2002 Keyes Fiber applied to Ecology to participate in the Voluntary Cleanup Program (VCP). However, as of August 18, 2005 there was no record of any cleanup activity. Ecology sent a letter stating that the site would be removed from the VCP program.

**Special Considerations:**

Because 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>10</u>		
		<b>Overall Rank:</b>	<u>5</u>

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

Total petroleum hydrocarbons-diesel (TPH-D)

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

The White Shield Environmental report contained results showing that TPH-D was present in the soil at concentrations that exceeded MTCA Level 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

Tph-D 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: 6250 cubic yards of contaminated soil	Source: <u>1,5</u> <b>Value: <u>5</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 not capped, score as landfill No cover = 2, no liner = 3 , no leachate collection = 2	1,5,9	<b>7</b> (Max = 10)
<b>2.2</b>	<b>Net precipitation:</b> 7.1 minus 2.8 = 4.3 inches	6	<b>1</b> (Max = 5)
<b>2.3</b>	<b>Subsurface hydraulic conductivity:</b> fine sand	1,5	<b>3</b> (Max = 4)
<b>2.4</b>	<b>Vertical depth to groundwater:</b> 50 to 100 feet	1,5	<b>4</b> (Max = 8)

**3.0 TARGETS**

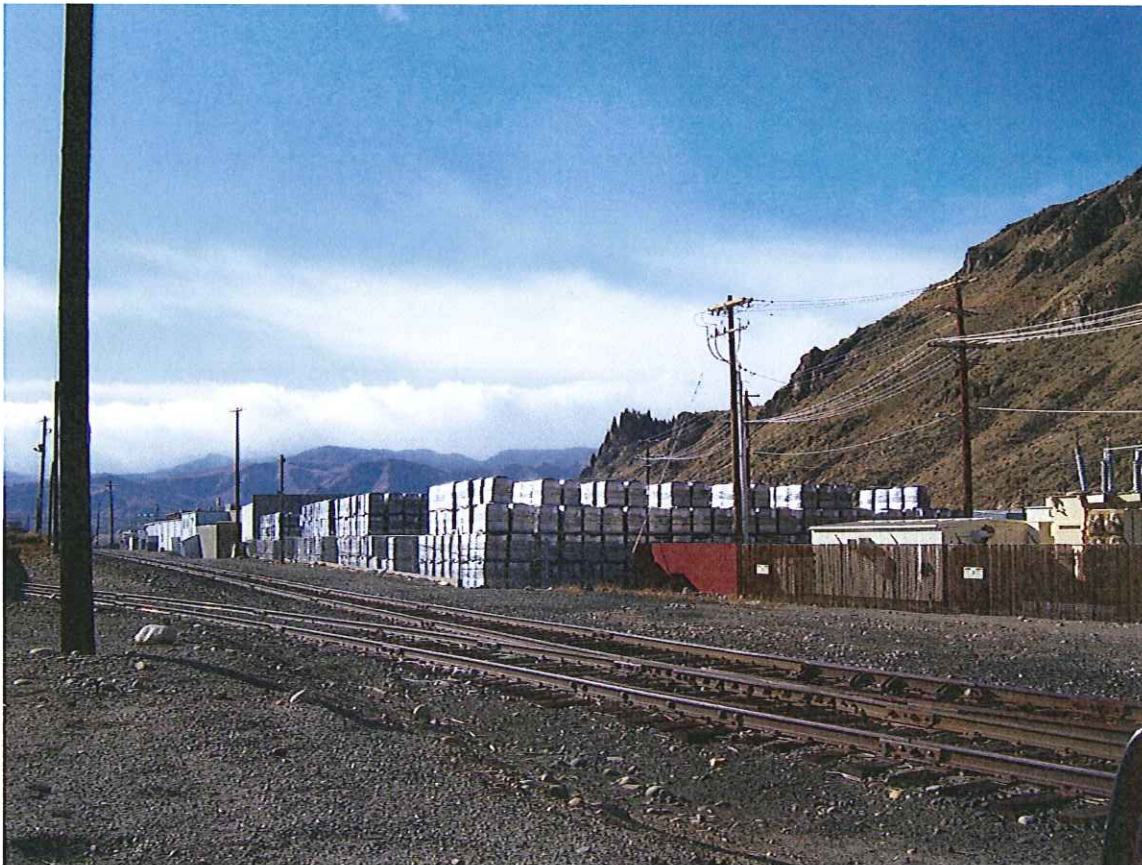
		<b>Source</b>	<b>Value</b>
<b>3.1</b>	<b>Public supply, no alternate unthreatened sources available</b>	5,7	<b>9</b> (Max = 10)
<b>3.2</b>	<b>Distance to nearest drinking water well:</b> <u>~1000</u> feet	5,8	<b>4</b> (Max = 5)
<b>3.3</b>	<b>Population served within 2 miles:</b> $\sqrt{\text{pop.}} = \sqrt{60} = 7.7$	5,7	<b>8</b> (Max = 100)
<b>3.4</b>	<b>Area irrigated by (groundwater) wells within 2 miles:</b> $(0.75) * \sqrt{286} \text{ acres} = \underline{12.7}$	5,7	<b>13</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. CH2M Hill Northwest, Inc. report dated May, 1991.
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.



Keyes Fiber Corporation November 9, 2009