

CSID 4762

WORKSHEET 1  
SUMMARY SCORE SHEET

Site Name/Location (Street, City, County, Section/Township/Range, TCP ID Number):

Cle Elum Petroleum Contamination	S - 26	TCP ID#, C-19-2007-000
SW corner of First Street and Billings Avenue	T - 20N	
Cle Elum, WA 98922	R - 15E	

Site Description (Include management areas, substances of concern, and quantities):

*The CleElum Petroleum Contamination site is located in the southwest corner of First Avenue and Billings Street, bordering the Timber Lodge Motel at 301 West First Street in CleElum. The initial complaint came from a U.S. West crew that was trenching for a phone line in November of 1991. The crew encountered approximately one inch of free petroleum product in the hole. The motel was formerly a gas station and the pumps had been located about 10 feet from the excavation. Across the street to the east is a Texaco station.*

*The Department of Ecology responded to the scene and observed petroleum contaminated soil approximately 10 feet down from the surface of the hole. The hole also contained water that had been contaminated with petroleum.*

*The soil from the excavation trench was stockpiled and sampled later. The analyses showed TPH-gas at 690 ppm and TPH-Diesel at 640 ppm. Both analysis exceed MTCA cleanup levels. The stockpiled soil have been removed from the site. There is documentation to show that the soil were properly disposed of.*

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):

*Since the remaining contamination is entirely subsurface, only the groundwater route is applicable to this site.*

*This site hazard assessment was conducted using the information obtained from the trenching activities that occurred in the city right-away. The Department of Ecology is in the process of conducting a city wide investigation of subsurface contamination. Numerous wells were recently installed within the city and one well was installed between the former trench site and the motel. This well is awaiting groundwater sampling by the Department of Ecology.*

ROUTE SCORES:

Surface Water/Human Health:	<u>NS</u>	Surface Water/Environ.:	<u>NS</u>
Air/Human Health:	<u>NS</u>	Air/Environmental:	<u>NS</u>
Ground Water/Human Health:	<u>44.3</u>		

OVERALL RANK: 3

**WORKSHEET 2**  
**ROUTE DOCUMENTATION**

**1. SURFACE WATER ROUTE**

List those substances to be considered for scoring:

Source: NS

*Not applicable/not scored*

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

List those management units to be considered for scoring:

Source: \_\_\_\_\_

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

Source: \_\_\_\_\_

**2. AIR ROUTE**

List those substances to be considered for scoring:

Source: NS

*Not applicable/not scored*

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

List those management units to be considered for scoring:

Source: \_\_\_\_\_

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

Source: \_\_\_\_\_

**WORKSHEET 2 (CONTINUED)**  
**ROUTE DOCUMENTATION**

**3. GROUND WATER ROUTE**

List those substances to be considered for scoring:

Source: 13

*TPH as gas and TPH as diesel*

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

*TPH as gas and diesel was detected at elevated concentrations in subsurface soils above MTCA.*

List those management units to be considered for scoring:

Source: 13

*Contaminated subsurface soil*

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

*During excavation of a trench by the phone company, the crew encountered petroleum contaminated soil approximately 10 feet down from the surface of the hole. The hole contained water that had a 1 inch layer of free petroleum product.*

**WORKSHEET 3 (If Required)  
SUBSTANCE CHARACTERISTICS WORKSHEET  
FOR MULTIPLE UNIT/SUBSTANCE SITES**

Combination 1   Combination 2   Combination 3

Unit:

**1. SURFACE WATER ROUTE**

Substance(s):  
Human Toxicity Value:  
Environ. Toxicity Value:  
Containment Value:  
Rationale:

Subscore: ( +3)( +1)=   ( +3)( +1)=   ( +3)( +1)=  
( ) ( ) = \_   ( ) ( ) = \_   ( ) ( ) = \_

Surface Water Environ.

Subscore: ( +3)( +1)=   ( +3)( +1)=   ( +3)( +1)=  
( ) ( ) = \_   ( ) ( ) = \_   ( ) ( ) = \_

Surface Water Human

**2. AIR ROUTE**

Substance(s):  
Human Toxicity/Mobility Value:  
Environ. Toxicity/Mobility Value:  
Containment Value:  
Rationale:

( +3)( +1)=   ( ) ( ) = \_   ( ) ( ) = \_   ( ) ( ) = \_  
Air Environ. Subscore: ( +3)( +1)=   ( +3)( +1)=   ( +3)( +1)=  
( ) ( ) = \_   ( ) ( ) = \_   ( ) ( ) = \_

Air Human Subscore: ( +3)( +1)=   ( +3)( +1)=

*Not Applicable*

**3. GROUND WATER ROUTE**

Substance(s):  
Human Toxicity Value:  
Containment Value:  
Rationale:

( +3)( +1)=   ( ) ( ) = \_   ( ) ( ) = \_   ( ) ( ) = \_

Ground Water Subscore: ( +3)( +1)=   ( +3)( +1)=

Based on their respective highest scoring toxicity/containment combinations, the following management units will be used for route scoring:

- Surface Water -
- Air -
- Ground Water -

**WORKSHEET 6  
GROUND WATER ROUTE**

**1.0 SUBSTANCE CHARACTERISTICS**

**1.1 Human Toxicity**

Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity	
	(ug/l)	Val.	(mg/kg-bw)	Val.	(mg/kg/day)	Val.	WOE	PF <sup>2</sup> Val.
1. TPH as diesel	20	6	490	5	0.004	3	-	-
2. TPH as gas	5	8	3306	3	-	-	1.0	.029 3
3.								
4.								
5.								
6.								

\*Potency Factor

Source: 1  
 Highest Value: 8  
 (Max.=10)  
 +2 Bonus Points?  
 Final Toxicity Value: 10  
 (Max.=12)

**1.2 Mobility (Use numbers to refer to above listed substances)**

Cations/Anions: 1= ; 2= ; 3= ; 4= ; 5= ;  
 6= .

Source: 2 Value: 3  
 (Max.=3)

OR

Solubility(mg/l): 1=30 mg/L ; 2= 1,800 mg/L ; 3= ; 4= ;  
 5 ; = 6= .

1.3 Substance Quantity: unknown amount  
 Explain basis: \_\_\_\_\_

Source: 13 Value: 1  
 (Max.=10)

**2.0 MIGRATION POTENTIAL**

**2.1 Containment**

Explain basis: contaminated soils are assigned  
a containment value of 10 under WARM

Source: 2 Value: 10  
 (Max.=10)

2.2 Net Precipitation: 26.0 inches

Source: 5 Value: 3  
 (Max.=5)

2.3 Subsurface Hydraulic Conductivity: >10<sup>-3</sup>

Source: 4, 7 Value: 4  
 (Max.=4)

2.4 Vertical Depth to Ground Water: 10 feet

Source: 13 Value: 8  
 (Max.=8)

**WORKSHEET 6 (CONTINUED)  
GROUND WATER ROUTE**

**3.0 TARGETS**

3.1 Ground Water Usage: <u>Private alternative sources available with minimum hookup.</u>	Source: <u>2</u>	Value: <u>4</u> (Max.=10)
3.2 Distance to Nearest Drinking Water Well: <u>5000 ft</u>	Source: <u>3</u>	Value: <u>2</u> (Max.=5)
3.3 Population Served within 2 Miles: $\sqrt{\text{pop.}} = \sqrt{213} = 14.5$	Source: <u>3</u>	Value: <u>15</u> (Max.=100)
3.4 Area Irrigated by (Groundwater) Wells within 2 miles: $0.75 \sqrt{\text{no. acres}} = 9$ $0.75 \sqrt{9} = 0.75 (3) = 2.25$	Source: <u>11</u>	Value: <u>2</u> <i>mdf</i> (Max.=5)
<b>4.0 RELEASE</b> Explain basis for scoring a release to ground water: <u>Visual inspection by Department of Ecology</u>	Source: <u>12</u>	Value: <u>5</u> (Max.=5)

**SOURCES USED IN SCORING**

1. Washington Department of Ecology, Toxicology Database for use in WARM Scoring, January 1992.
2. Washington Department of Ecology, WARM Scoring Manual April 1992.
3. USGS 7.5 minute Topographic Quadrangle - Cle Elum - Washington.
4. USDA Soil Conservation Survey, Soil Survey of Kittitas County.
5. Washington Climate for Kittitas County, May 1979.
6. NOAA Atlas 2, Volume IX, Isopluvials of 2 yr., 24 hr precipitation in tenths of an inch, US Dept. Of Commerce.
7. Kittitas County Department of Solid Waste Site Hazard Assessment Field Investigations, May 16 and June 10, 1996.
8. National Wetland Inventory, map Cle Elum, Washington
9. Water Well Report, State of Washington.
10. Sole Source Aquifers in the State of Washington, EPA 1995.
11. Water Rights Information System, Washington Department of Health, Spokane.
12. Site inspection by Department of Ecology on November 25, 1991.
13. Results of analyses of the soil samples from the stockpiled soils from trench excavation, November 20, 1991.