Reviewed 7/23
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SITE HAZARD ASSESSMENT
WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Name: Car Crushing Hoko River HWY 112, Van Riper Property
Address: 11630 HWY 112
City: **Sekiu** County: **Clallam** State: **WA** Zip: **98381**
Section/Township/Range: **S15/ T32W/ R13N**
Latitude: **48° 16' 30" N** Longitude: **124° 21' 37" W**
TCP ID #: **4690075**

Site scored/ranked for the August 2009 update.

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

The Van Riper Property is located at 11630 HWY 112 in Sekiu located on the far northwest part of the Olympic Peninsula. The triangular shaped property is bordered by the Hoko River on the west and on north (hypotenuse) by HWY 112. It is 2.34 acres. There is a 6,200 square foot old shingle mill on the site. The area is zoned low rural (R5). Critical areas have been identified on the southwest portion of the property with channel meander hazard and 100 year flood area. The property is owned by Tim and Harold Van Riper.

On November 6, 2007, Jennifer Garcelon received two reports of car crushing activities at 11630 HWY 112 in Sekiu. The callers were concerned that auto fluids were improperly handled.

It had rained constantly for the past week, so the site was very muddy. There were large mud puddles on site. In many of the puddles there was a thick black liquid or a sheen on the top layer of the puddles. The piece of equipment used to puncture the fluid tanks in the vehicles was an old storage tank cut in half with a spike in the middle. There was a drain on one side; beneath the drain was a 55 gallon drum.

There did not appear to be any fluid collection devices as part of the car crusher. There is a ditch behind the car crusher near a tire pile which had three absorbent pads throughout the ditch as the only spill prevention devices. In the mud puddles on the back side of the car crusher, there were yellow and red fluids on top of the puddles. Around 1:00 PM, two workers from RMB Salvage out of Yakima came back to the site. Ms. Garcelon reported her findings and sent photos to Ecology immediately upon arrival back into the office.

On November 16, 2007, John Hanson, an Ecology Spill Responder, Nanette Brooks, an Ecology Hazardous Waste Compliance Inspector, and Ms. Garcelon conducted another site inspection. The property owner, Mr. Tim Van Riper was on site, as well as Mr. Don Baker who coordinated the operation and transported the vehicles to the site. The car crushing operation had ended by this site visit. Ms. Brooks took two soil samples, one in a depression and one in the ditch that flows into the

Hoko River; Ms. Brooks took one water sample from the ditch. The samples were analyzed for total petroleum hydrocarbons (TPH)-Dx and Gx, BTEX, PAHs, and metals.

In the surface water there were exceedances of MTCA Method A Cleanup for Groundwater for lead, benzene, TPH diesel and TPH heavy oil. Additionally there were surface water ARAR exceedances of benzene and lead in the ditch water. In the soil there were Model Toxic Control Act (MTCA) Method A Cleanup exceedances for TPH diesel and heavy range organics in the soil and surface water. The sample results are described in the tables below.

Table 1 Ditch Water Sample Results

Ditch Water	Result	MTCA Method A Cleanup for Groundwater	ARAR WAC 173-201A	ARAR Clean Water Act §304	ARAR National Toxics Rule 40 CFR 131
Pb	47 ppb	15 ppb	14 ppb[1] 0.54 ppb[2]	2.5 ppb[3]	2.5 ppb[3]
Benzene	15 ppb	5 ppb	Not Researched	2.2 ppb[4]	2.2 ppb[4]
DRO	940,000 ppb	500 ppb			
RRO	2,300,000 ppb	500 ppb			

ARAR=Applicable or Relevant and Appropriate Requirements
[1]Aquatic Life-Fresh/Acute
[2]Aquatic Life-Fresh/Chronic
[3]Aquatic Life-Fresh/Chronic
[4]Human Health-Fresh Water

Table 2 Soil Sample Results

Soil	Result	MTCA Method A Cleanup
Ditch DRO	9,100 ppm	2,000 ppm
Ditch RRO	26,000 ppm	2,000 ppm
Depression RRO	2,300 ppm	2,000 ppm

Other noteworthy sample results include GRO in water was 670 ppb (MTCA Method A Cleanup is 1,000 ppb if benzene is not detected, 800 ppb if benzene is detected). GRO in ditch soil was 35 ppm (MTCA Method A Cleanup is 100 ppm, with no benzene detected, and 30 ppm with benzene detected); GRO is depression soil was 45 ppm (MTCA Method A Cleanup is 100 ppm, with no benzene detected, and 30 ppm with benzene detected).

Sampling results at Car Crushing Hoko River HWY 112, Van Riper Property indicate that contaminant levels in surface water exceed MTCA Method A cleanup standards for ground water for

lead, benzene, and total petroleum hydrocarbon diesel and heavy oil and the soil samples exceed the Model Toxics Control Act Method A cleanup levels for total petroleum hydrocarbons diesel and heavy oil. These concentrations require the site be scored and ranked under the Washington Ranking Method (WARM).

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):

ROUTE SCORES:

Surface Water/Human Health:	**40.0**	Surface Water/Environmental.:	**56.3**
Air/Human Health:	**NS**	Air/Environmental:	**NS**
Groundwater/Human Health:	**50.5**		

OVERALL RANK: 1

WORKSHEET 2
Route Documentation

1. **SURFACE WATER ROUTE**

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

   Lead, benzene, total petroleum hydrocarbons-diesel and heavy oil

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

   Analytical results from soil sampling indicate the presence of these hazardous substances at levels which exceed our current Method A cleanup levels.

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

   Surface and subsurface soils

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

   Spills/discharges caused surface water and soil contamination

2. **AIR ROUTE –NOT SCORED**

3. **GROUNDWATER ROUTE**

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

   Lead, benzene, total petroleum hydrocarbons-diesel and heavy oil

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

   Analytical results from soil sampling indicate the presence of these hazardous substances at levels which exceed our current Method A cleanup levels.

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

   Surface and subsurface soils

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

   Spills/discharges caused surface water and soil contamination

WORKSHEET 4
Surface Water Route

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

	Substance	Drinking Water Standard (µg/L)	Value	Acute Toxicity (mg/kg-bw)	Value	Chronic Toxicity (mg/kg/day)	Value	Carcinogenicity WOE	Carcinogenicity PF*	Value
1	Lead	5	8	ND	--	0.001	10	ND	ND	--
2	Benzene	5	8	3,306 (rat)	3	ND	--	A=1	5	5
3	TPH-Diesel	160	4	490 (rat)	5	0.003	3	ND	ND	--
4	TPH-Heavy Oil	ND	--	ND	--	0.001	1	ND	ND	--

**Potency Factor*

Source: 2, 3

Highest Value: 10
(Max = 10)

Plus 2 Bonus Points? 2

Final Toxicity Value: 12
(Max = 12)

1.2 Environmental Toxicity (X) Freshwater ( ) Marine

	Substance	Acute Water Quality Criteria (µg/L)	Value	Non-Human Mammalian Acute Toxicity (mg/kg)	Value
1	Lead	82	6	ND	--
2	Benzene	5,300	2	ND	--
3	TPH-Diesel	2,300	2	ND	--

Source: 2, 3

Highest Value: 6
(Max = 10)

1.3 Substance Quantity (aerial extent)

Explain Basis: Unknown; use default=1

Source: 1

Value: 1
(Max = 10)

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	**Containment:** Management unit scored as a spills/discharges/contaminated soil at the surface, with no maintained run-on/runoff controls. **Explain basis:** Contaminated soil with no run-on/run-off control	1	**10** (Max = 10)
2.2	**Surface Soil Permeability:** Queets-Tealwhit silt loam	8	**3** (Max = 7)
2.3	**Total Annual Precipitation:** > 100"/year	4	**5** (Max = 5)
2.4	**Max 2yr/24hr Precipitation:** 4.48"	9	**5** (Max = 5)
2.5	**Flood Plain:** In 100 year flood plain	10	**2** (Max = 2)
2.6	**Terrain Slope:** <2%	1	**1** (Max = 5)

3.0 TARGETS

		Source	Value
3.1	**Distance to Surface Water:** 220'	10	**10** (Max = 10)
3.2	**Population Served within 2 miles (see WARM Scoring Manual Regarding Direction):** √(18)=4.2	6	**4** (Max = 75)
3.3	**Area Irrigated by surface water within 2 miles : (0.75)*√ # acres =** 0.75 * √ (0) = 0	6	**0** (Max = 30)
3.4	**Distance to Nearest Fishery Resource:** Hoko River	1, 10	**12** (Max = 12)
3.5	**Distance to, and Name(s) of, Nearest Sensitive Environment(s):** 220' to Hoko River	1, 10	**12** (Max = 12)

4.0 RELEASE

Explain Basis: Visually observed auto fluids in puddles on site. TPH was found in the ditch that drains into the Hoko River.	Source: 1 **Value: 5** (Max = 5)

WORKSHEET 6
Groundwater Route

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

	Substance	Drinking Water Standard (µg/L)	Value	Acute Toxicity (mg/ kg-bw)	Value	Chronic Toxicity (mg/kg/day)	Value	Carcinogenicity WOE	Carcinogenicity PF*	Value
1	Lead	5	8	ND	-	<0.001 (NOAEL)	10	ND	ND	-
2	Benzene	5	8	3,306	3	ND	-	A=1	5	5
3	TPH-Diesel	160	4	490 (rat)	5	0.004	3	ND	ND	-
4	TPH-Heavy Oil	ND	1	ND	-	2.0	1	ND	ND	-

* *Potency Factor*

Source: 2, 3
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 [Coefficient of Aqueous Migration (K)] OR	Solubility (mg/L)
1= K > 1.0 = 2	1=
2=	2= 1.8×10^3 = 3
3=	3=3.0×10^1 = 1
4=	4=6.6E-03 = 0

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

1.3 Substance Quantity (volume):

Explain basis: Unknown; use default =1

Source: 1
Value: 1
(Max=10)

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	**Containment (explain basis):** Management unit scored as a spills/discharges/contaminated soil at the surface, with no maintained run-on/runoff controls. **Explain basis:** Contaminated soil with no run-on/run-off control	1	**10** (Max = 10)
2.2	**Net precipitation:** >100"/year	4	**5** (Max = 5)
2.3	**Subsurface hydraulic conductivity:** silty clay	11	**2** (Max = 4)
2.4	**Vertical depth to groundwater:** water well reports nearby indicate groundwater in the area is at a depth of 17 feet	5, 6, 11	**8** (Max = 8)

3.0 TARGETS

		Source	Value
3.1	**Groundwater usage:** Public supply, but alternate sources available with minimum hookup requirements	6	**4** (Max = 10)
3.2	**Distance to nearest drinking water well: ~550 feet**	1, 11	**5** (Max = 5)
3.3	**Population served within 2 miles: √ pop. =** √(1902) = 43.6	6, 7	**44** (Max = 100)
3.4	**Area irrigated by (groundwater) wells within 2 miles: (0.75)*√# acres =** 0.75 * √(0) = 0	6	**0** (Max = 50)

4.0 RELEASE

	Source	Value
Explain basis for scoring a release to groundwater: Not documented	1	**0** (Max = 5)

SOURCES USED IN SCORING

1. Analytical results of surface water and soil sampling conducted on November 16, 2007 by the WA Dept. of Ecology.
2. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
3. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
4. Ecology Precipitation Map – Net Rainfall Table, http://www.ecy.wa.gov/services/gis/maps/state/precip/ptm-a.pdf, accessed 6/30/2009.
5. Washington State Department of Ecology, Water Well Reports.
6. Washington State Department of Ecology, Water Rights Application System (WRATS) printouts.

7. Washington State Department of Health, Office of Drinking Water Sentry website printout for public water supplies, accessed 6/30/2009.
8. United States Department of Agriculture Soil Conservation Service, Soil Survey of Clallam County Area, Washington, 1979.
9. National Oceanic and Atmospheric Administration, National Weather Service http://www.nws.noaa.gov/oh/hdsc/noaaatlas2.htm, accessed 6/30/2009.
10. Clallam County Department of Community Development Critical Area Map
11. Well log AGL163, Indian Health Service for Mike Hanson at 11720 HWY 112.