# WORKSHEET 1 Summary Score Sheet

SITE INFORMATION:

Name:Sportland Mini MartAddress:4402 Bullfrog RdCity:Cle ElumCounty: KittitasSection/Township/Range:T20N R15E S21 SW ¼, SW ¼

Latitude: **47.20736** TCP ID #: **77133953**  Longitude: -120.98119

Site scored/ranked for the February 2012 update

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



Sportland Mini Mart has been a retail service station since about 1980. At this time the tanks were installed and, according to the owner, had been used prior to their installation at this site. Both leaded and unleaded gasoline has been sold at this station.

In fall 1998, two 10,000-gallon steel, gasoline UST systems were decommissioned. Upon removal, groundwater was observed in the excavation at a depth of about 14.5 feet bgs. The dispenser island and piping were also removed.

Petroleum impacted soil was discovered beneath the dispenser; the release likely occurred from a dispenser fitting.

Following field screening, four soil samples were collected from the UST basin, one from beneath the piping run, and one from beneath the dispenser island. Three samples were also collected from the stockpiled soil. Laboratory analysis of the dispenser island soil sample (at 3.5 feet bgs) found 3,370 ppm gasoline, 0.11 ppm benzene, and 54.4 ppm xylenes, which exceed MTCA Method A cleanup levels.

The tank excavation was backfilled with clean stockpiled overburden material and about 48 yd<sup>3</sup> of shallower impacted soil were removed from the dispenser area. The report states that gasoline-range petroleum hydrocarbons remain at depth in soil beneath the dispenser island and within the suspected groundwater fluctuation zone. Subsurface soil was generally found to be silty gravel to a depth of 25 feet. Groundwater was encountered at 16.5 feet bgs.

A second excavation was dug for the installation of new USTs. Soil samples were collected from the base of this excavation at 16 feet bgs along with one groundwater sample. Analytical results indicated 190 and 1800 ppm gasoline and BTEX at levels that exceed MTCA Method A cleanup levels. No lead was detected in either sample. BTEX and TPH-G were also found above cleanup levels in the groundwater sample.

On October 6-7, 1998 five exploratory borings were drilled and soil samples collected. The borings were used to install groundwater monitoring wells to a depth of 25 feet. Groundwater samples were collected from MW-1, 2, and 3 but MW-4 was dry. The report has inconsistent data suggesting MW-3 had either a sheen or 0.2 feet free product and MW-5 had 0.2 feet (or 3") free product. Groundwater flow direction was determined to be to the northeast.

On October 20, 1998 free product was measured in MW-3 at 2.2 feet and MW-5 at 0.45 feet. Groundwater flow direction was determined to be to the southeast.

These soil and groundwater samples were analyzed for TPH-G and BTEX. Lab results were nondetect except for soil samples from MW-3 and MW-5, which are below Method A cleanup levels.

Sample No.	Depth (bgs)	TPH-G (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
MW-3	15'	25	0.13	0.1
MW-5	17'	14	ND	ND

The groundwater sample from MW-3 found high levels of TPH-G, and BTEX while samples from MW-1 and 2 were non-detect for all analytes.

Sample No.	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-3	213,500	2,720	17,200	25,000	5,700

Between November 3 and December 3, 1998, ~300 gallons of free product and dissolved phase hydrocarbons in water were pumped into a recovery tank. Since the wells had been installed, groundwater had risen ~nine feet in MW-3 and 5 and the groundwater table elevation had changed considerably.

In August 1999, groundwater was evaluated in four onsite wells. Samples could only be collected from MW-2 and 4 because 0.5 inches of free product was measured in MW-3 and 5. MW-1 could not be sampled because the surface cover and piping had been damaged during snow plowing the previous winter. Groundwater flow direction was not determined at this time.

Sample No.	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2	ND	2.8	ND	ND	ND
MW-4	890	12	2.3	ND	120

There are no more recent reports indicating groundwater sampling or remediation activities have been conducted at the site.

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):

Due to the significant contamination documented on-site being primarily subsurface, the surface water and air routes are not applicable for WARM scoring for this site. Thus, only the groundwater route will be scored.

#### **ROUTE SCORES:**

Surface Water/Human Health:	n/a	Surface Water/Environmental.:	n/a
Air/Human Health:	n/a	Air/Environmental:	n/a
Groundwater/Human Health:	42.5		

OVERALL RANK: 3

## WORKSHEET 2 Route Documentation

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

#### 2. AIR ROUTE – Not Scored

#### 3. GROUNDWATER ROUTE

a. List those substances to be <u>considered</u> for scoring: Source: 1-4

#### Benzene

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

#### Analytical results of groundwater samples exceed Method A cleanup levels.

c. List those management units to be <u>considered</u> for scoring: Source: 2-4

#### Groundwater

d. Explain basis for choice of unit to be <u>used in scoring</u>:

# Laboratory results confirm the presence of free product, including benzene at levels which exceed Method A cleanup levels.

# WORKSHEET 6 Groundwater Route

## **1.0 SUBSTANCE CHARACTERISTICS**

1.2	2 Human Toxici	ty								
		Drinking		Acute		Chronic		Carcinogenicity		
	Substance	Water Standard (µg/L)	Value	Toxicity (mg/ kg-bw)	Value	Toxicity (mg/kg/day)	Value	WO E	PF*	Value
1	Benzene	5	8	3306	3		ND	0.8	0.029	5
* Potency Factor Source: <u>6</u>										
	Highest Value: <u>8</u>									

(Max = 10)

Plus 2 Bonus Points?  $\underline{0}$ Final Toxicity Value:  $\underline{8}$ (Max = 12)

<b>1.2</b> Mobility (use numbers to refer to above listed substances)				
Cations/Anions [Coefficient of Aqueous Migration (K)]	OR	Solubility (mg/L)		
1=	1=	$1.8 \ge 10^3 = 3$		
			Source: <u>6</u>	



1.3 Substance Quantity:	
Explain basis: Unknown, use default value = 1	Source: <u>6</u> Value: <u>1</u> (Max=10)

# 2.0 MIGRATION POTENTIAL

		Source	Value
2.1	<b>Containment (explain basis):</b> Leaking underground storage tank site; Cover present over most of site, but areas of gravel	6	<b>9</b> (Max = 10)
2.2	<b>Net precipitation:</b> 28.3" – 2.3" = 26"	8	<b>3</b> (Max = 5)
2.3	Subsurface hydraulic conductivity: silty basalt gravels	2	<b>3</b> (Max = 4)
2.4	<b>Vertical depth to groundwater:</b> Confirmed contamination = 0'	2, 3, 4	<b>8</b> (Max = 8)

#### **3.0 TARGETS**

#### Source Value

3.1	Groundwater usage: Public supply but alternate sources available	6, 11	<b>4</b> (Max = 10)
3.2	Distance to nearest drinking water well: 750 feet	12	<b>4</b> (Max = 5)
3.3	<b>Population served within 2 miles:</b> $\sqrt{\text{pop.}} = \sqrt{1899} = 43.6$	11, 12	<b>44</b> (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: (0.75)* $\sqrt{\#}$ acres = 0.75 * $\sqrt{332}$ = 13.67	10	<b>14</b> (Max = 50)

#### 4.0 RELEASE

	Source	Value
Explain basis for scoring a release to groundwater: Confirmed presence based		-
on analytical results of groundwater samples collected from groundwater	2, 3, 4	5 (May $-5$ )
monitoring wells.		(1vIdX = 3)

# SOURCES USED IN SCORING

- 1. Underground Storage Tank Site Assessment, GN Northern, Inc., October 22, 1998
- 2. Report of Soil/Groundwater Characterization Assessment, GN Northern, Inc., November 9, 1998
- 3. Letter Report of Free Product Recovery, GN Northern, Inc., December 28, 1998
- 4. Quarterly Groundwater Monitoring, GN Northern, Inc., September 8, 1999
- 5. Site Hazard Assessment Drive-by by Krystal Rodriguez, March 19, 2011
- 6. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
- 7. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
- 8. Washington Climate Net Rainfall Table
- 9. US EPA SITEINFO GIS Query for Latitude/Longitude of site Attached
- 10. Washington State Department of Ecology, Water Rights Application System (WRATS) printout for two-mile radius of site.
- 11. Washington State Department of Health, Office of Drinking Water Sentry website printout for public water supplies
- 12. Kittitas County Assessors data