

WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Name: Tri City Battery Goodyear
Address: 601 George Washington Way
City: **Richland** County: **Benton** State: **WA** Zip: **99352**
Section/Township/Range: **S11/T9N/R28E**
Latitude: **N46° 16' 23.7"** Longitude: **W119° 16' 27.2"**
TCP ID #: **43737443**

Site scored/ranked for the February 2008 update
September 27, 2007

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

The subject site is located on the northwest corner of George Washington Way and Jadwin Avenue in Richland. Goodyear Tire operated a tire sales and service business out of the building in the late sixties to the early seventies and then again in the late eighties. Between roughly 1975 and 1985, Top Auto ran an auto repair shop out of the facility. In the early nineties there was a car dealership known as Shumate Mazda. In 1994, Tri-Cities Battery held a business license under the subject address which was kept current until December 2005.

The site was an automotive repair shop known as Tri-Cities Battery in 1995 when a 550 gallon steel underground storage tank (UST) containing waste oils was removed from the northeastern portion of the property. The UST installation date is unknown as is the last time the tank was in use. During the excavation of the UST, soil staining was observed near the tank fill pipe, suggesting overfills and spills during the filling process. Twelve cubic yards of stained soil were removed and recycled at Columbia Ready Mix Inc. Soil samples from the excavation did not reveal any soils above Model Toxics Control Act (MTCA) Method A cleanup level for heavy oil.

Goodyear's consultant LFR Inc. (LFR) reported contaminated soils identified during excavation of a storm drain in 2006. Their report claimed that petroleum was released into a drywell at the north end of the property. LFR tried to excavate that area to remove all contaminated soil from the site; however, soil samples taken at the extent of the excavation resulted in concentrations of heavy oil, PCBs (polychlorinated biphenyls), and total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) being reported above their respective MTCA Method A cleanup levels. The sample results also indicated elevated levels of mercury at 1.9 mg/kg, just slightly below its MTCA Method A cleanup level of 2.0 mg/kg.

LFR also removed four single hoists, two double hoists, and a sump from the interior of the building during the removal of the storm drain and the drywell excavation. Sample results inside the building excavation are all under their respective MTCA cleanup levels.

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.

Benzo(a)pyrene will be scored in place of the total cPAHs. Benzo(a)pyrene is an indicating compound of cPAH contamination and benzo(a)pyrene soil contamination was reported at 0.0465 mg/kg at the extent of the drywell excavation.

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>65.9</u>		

OVERALL RANK: 2

WORKSHEET 2
Route Documentation

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

- a. List those substances to be considered for scoring:

Source:

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

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

Source

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

2. **AIR ROUTE** – *or Not Scored*

- a. List those substances to be considered for scoring:

Source:

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

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

Source:

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

3. **GROUNDWATER ROUTE** –

- a. List those substances to be considered for scoring:

Source: 1

Heavy oil, mercury, benzo(a)pyrene (for total cPAH), & PCBs

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

Analytical results from soil samples showed concentrations greater than their respective Method A MTCA cleanup levels for all substances except mercury. The mercury concentration in the soil is less than MTCA method A, but still found at the site to be in high concentrations maxing out the toxicity value score.

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

Source: 1

Contaminated on site soils

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

Chemical analyses of on-site soil and groundwater indicated concentrations of various chemicals, the contaminants chosen for scoring will max out the toxicology value.

WORKSHEET 6
Groundwater Route

1.0 SUBSTANCE CHARACTERISTICS

1.2 Human Toxicity										
Substance	Drinking Water Standard (µg/L)	Value	Acute Toxicity (mg/ kg-bw)	Value	Chronic Toxicity (mg/kg/day)	Value	Carcinogenicity		Value	
							WOE	PF*		
1 Benzo(a)Pyrene	0.2	10	50(rat)	10	ND	-	B2	12	7	
2 Heavy Oil	ND	-	ND	-	0.04	1	ND	ND	-	
3 Mercury	2	8	ND	-	0.0003	5	ND	ND	-	
4 PCBs	0.5	10	1315(rat)	3	ND	-	B2	7.7	6	

* Potency Factor

Source: 1,3,4

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	OR Solubility (mg/L)
1=	1= $1.2 \times 10^{-3} = 0$
2=	2= $1.0 \times 10^1 = 1$
3= $>1.0 = 3$	3=
4=	4= $3.1 \times 10^{-2} = 0$

Source: 3,4

Value: 3

(Max = 3)

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

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	Containment (explain basis): Soil contamination from drywell at 23 feet below the ground surface. Release to soil/no soil = 10	2	10 (Max = 10)
2.2	Net precipitation: 5.0" – 3.2" = 1.8"	5	1 (Max = 5)
2.3	Subsurface hydraulic conductivity: Poorly sorted sand and gravel	2	4 (Max = 4)
2.4	Vertical depth to groundwater: Groundwater is 15 to 45 feet deep; contamination of soil is at 23 feet. < 25 feet	2	8 (Max = 8)

3.0 TARGETS

		Source	Value
3.1	Groundwater usage: Public supply, but alternate sources are available with minimum hookup	7,9	4 (Max = 10)
3.2	Distance to nearest drinking water well: ~3000 feet	9	2 (Max = 5)
3.3	Population served within 2 miles: $\sqrt{\text{pop.}} = > 10,000$	7	100 (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: $(0.75) * \sqrt{\# \text{ acres}} = 0.75 * \sqrt{443.52} = 15.79$	6	16 (Max = 50)

4.0 RELEASE

		Source	Value
	Explain basis for scoring a release to groundwater: None documented	1	0 (Max = 5)

SOURCES USED IN SCORING

1. Email from Jeff Leppo, LFR, Inc. to Mark Dunbar, Ecology, and related attachments sent on February 27, 2006.
2. "UST Closure Site Assessment Report" May 1995 prepared for Ogden Environmental prepared by White Sheild.
3. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
4. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
5. Washington Climate for Benton, Franklin Counties, Cooperative Extension Services, College of Agriculture, Washington State University.
6. Washington State Department of Ecology, Water Rights Application System (WRATS) printout for two-mile radius of site.
7. Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, Water System Search, Available at <http://www4.doh.wa.gov/SentryInternet/FindWaterSystem.aspx>
8. Facility Site/Atlas, Department of Ecology, Geographic Information System, available at <http://apps.ecy.wa.gov/website/facsite/viewer.htm>
9. Benton County Geographic Information System.
10. Phone Interview Cindy Somer, Permit Expeditor , City of Richland Building Department, September 13, 2007.
11. Site Visit by Kay Rottell on September 19, 2007.