CSID 92

WORKSHEET 1
SUMMARY SCORE SHEET

Site Name:

BNRR Bridge 270/4 Replacement
Hwy 270 & College Ave., Pullman, Whitman County
Township 14, Range 45, Section 5, TCP ID E-38-3011-000

Site Description:

The Subject property is bordered on the north by College Street, on the west by Riverview Street (Spring Street), on the south by railroad property and student parking areas, and on the east by Tacoma Street. A structure is present in the northern section of the property and is used by Washington State University (WSU) power plant personnel to store equipment. The property is fenced and has been used by WSU to stockpile coal and incinerated coal ash. The former bulk fuel storage facility was previously owned by Chevron U.S.A. Products Company and existed on the site from at least 1920 to its dismantling in about 1981. Historical spills and leaks have contaminated underlying soils and shallow groundwater with petroleum hydrocarbons. In 1981, Chevron donated the property to Washington State University. The local area within the watershed is used primarily for parking by WSU students and is occupied by a city park with playing fields. The WSU coal power plant and scattered retail stores are also present within the valley. Washington State University and housing is located east of the subject site. To the south and west of the site, on the plateau above the drainage, are located residential housing and retail centers.

Special Considerations:

The basaltic rocks that host the regional aquifer system underlying the Columbia Plateau are located in central and eastern Washington, northern Oregon, and a small portion of north-western Idaho. The basalt under the Columbia Plateau comprise a multilayered aquifer system. Many basalt flows are connected hydraulically either directly or through sedimentary interbeds. These interbeds typically are comprised of regolith soils derived from weathering of the top of the basalt flow or from interbed fluvial gravel/sands which were buried by later flows. These major aquifers within the basalt interflows form the regional groundwater system that provides water for most municipal, industrial, domestic and for agricultural purposes. Water supply wells in the area are deep and draw water from the permeable basalt interbeds. The shallow groundwater encountered beneath the site represents an aquifer perched above basalt bedrock and is not a part of the deeper, regional aquifer system. For this reason, a release to groundwater was not scored.

ROUTE SCORES:

Surface Water: N/A

Air: N/A

Ground Water/Human Health: _____

OVERALL RANK: 3

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE N/A

2. AIR ROUTE N/A

3. GROUND WATER ROUTE

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

TPH - Gasoline
TPH - Diesel
Xylene

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

Contaminates found in analysis of soil and shallow, perched groundwater in excess of MTCA Method A Cleanup Standards.

List those management units to be considered for scoring: Source:

Contaminated subsurface soil.

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

Clean soils and gravel placed over contaminated soil. Groundwater contamination is limited to a shallow, perched water table separated from the regional drinking water aquifer system by several hundred feet of basalt. For this reason, a release to groundwater was not scored in the assessment of this site.

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. TPH-G	5	8	3306	3	X		ND	A	0.029 5
2. TPH-D	20	6	490	5	0.004	3	X	X	X
3. Xylene	10,000	2	50	10	2	1			

*Potency Factor

Source: 3
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

1.2 Mobility Source: 3 **Value: 3**

Solubility (mg/1): 1 = 1.8 E + 03 → 3 ; 2 = 3.0 E + 01 → 1 ; ___
3 = 2.0 E + 02 → 2

1.3 Substance Quantity Source: 2 **Value: 5**

Estimate of site contamination approx 6,500 cu yds of soil.

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 1 **Value: 10**

Explain basis: Spills, discharges, and contaminated soil.

2.2 Net Precipitation: 9.7 inches Source: 4 **Value: 1**

2.3 Subsurface Hydraulic Conductivity: $> 10^{-7}$ - 10^{-5} Source: 8 **Value: 2**

2.4 Vertical Depth to Ground Water: >200-300 feet Source: 7 **Value: 2**

3.0 TARGETS

3.1 Ground Water Usage: Public Water, Alternate Source Source: 7 **Value: 4**

3.2 Distance to Nearest Drinking Water Well: ≤600 feet Source: 5 **Value: 5**

3.3 Population Served within 2 miles: √pop. = 35,000 = 187 Source: 5 **Value: 100**

3.4 Area Irrigated by (Groundwater) Wells

within 2 miles: 0.75√no. acres = Source: 6 **Value: 7**
0.75√ 78 = 0.75 (8) = 7

4.0 RELEASE

Source: 1 **Value: 0**

No release to the regional drinking water aquifer system. ___

SOURCES USED IN SCORING

1. Environmental Assessment, Former Bulk Storage Facility, Pullman, WA. Prepared for Chevron Products Co., Inc. by RZA AGRA, Inc.

2. Level II Environmental Site Assessment BNRR Overcrossing Bridge 270/4 Replacement

3. Toxicology Database - WARM

4. Washington Climate, Whitman County, WSU Cooperative Extension

5. EPA SITEINFO

6. WRIS, DOE

7. W.D.O.H. Drinking Water Information Network

8. WARM Scoring Manual