

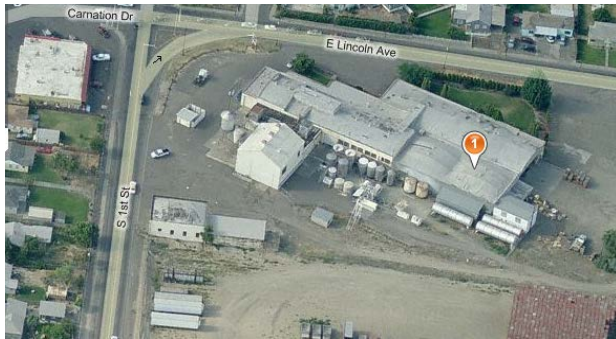
WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Name: **Cream Wine**
Address: **111 E Lincoln Ave**
City: **Sunnyside** County: **Yakima** State: **WA** Zip: **98944**
Section/Township/Range: **NW ¼, NW ¼ S36/T10N/R22E**
Latitude: **46.31603** Longitude: **-120.01874**
TCP ID #: **46552166**

Site scored/ranked for the February 2012 update

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



The site consists of ~4.7 acres and began operations as an evaporated milk plant in 1942. The facility was closed for a few years, reopened as a winery, foreclosed, and since 2007 has operated as a winery. This site has also been formerly used as a truck shop garage, a mechanical shop, a coal bin, and a fueling facility with an underground storage tank.

The tank was reportedly removed, but no report documenting this action has been located. In 1996, an adjacent property discovered leaking USTs and a cleanup was initiated. This involved development of a monitoring system that extended into the Cream Wine property. The system included 18 monitoring wells and 5 recovery wells, most of which are on the Cream Wine property (12 monitoring and 5 recovery wells). The remediation technologies included soil vapor extraction and in-situ air sparging. Prior to beginning operations, free product could be measured in four monitoring wells with thicknesses generally greater than 0.5 feet. Groundwater sampling in 2006 found TPH-G, benzene, and MTBE.

In 2000 a “bioslurp” remedial system was installed at both the adjacent property and Cream Wine to remove any free product found in the wells. Also, ORCs were placed in direct-push borings and existing wells. Soil and groundwater samples on the adjacent property, reportedly, had not been analyzed for PCE.

As part of a Phase II Site Assessment, six soil borings were drilled to 16’ bgs in March 2007; no groundwater was encountered. Soil samples collected at 16’ bgs were analyzed for BTEX, TPH-G and/or TPH-Dx. Four soil samples had below MTCA cleanup levels of TPH-Gx. One soil sample tested positive for hydraulic oil (710 ppm) but is below cleanup levels. The site assessment was done in the location of the former UST system to determine if there was any contamination. The samples were not tested for PCE, TCE or MTBE.

In September 2008, seven soil borings were advanced to 25' bgs and one boring advanced to 40' bgs. Soil and groundwater samples were analyzed for VOCs, including MTBE. VOCs were not detected in any of the 13 soil samples (three shallow soil samples were not analyzed at all). VOCs, toluene, benzene and PCE were detected in several groundwater samples, but all were below MTCA method A cleanup levels.

In August 2009, eight additional soil borings (four beneath the former winery building) were advanced; two were developed into monitoring wells. Most soil samples were shallow (1-5' bgs) and all found to be non-detect with the exception of a sample collected at 5' bgs from MW-20. This sample found the presence of several VOCs but all were below MTCA Method A cleanup levels. Please note that the reporting limits for PCE were greater than cleanup standards.

Results from groundwater samples found the following contaminants of concern (COC):

COC	>Method A (µg/L)	<Method A	Method A (µg/L)
MTBE	RW-03 (72.6); RMW-09 (76.2)	MW-18, RW-04	20.0
PCE	MW-11 (5.53), MW-17 (17.8), MW-18 (38.1), RW-04 (7.48)	MW-12, MW-14, MW-19, KJB-9-GW, KJB-10-GW	5.0
TCE	RW-04 (26.8)	MW-18	5.0

Additionally, xylenes were detected in three wells, naphthalene in one well, and VOCs in 11 wells.

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):

This Site Hazard Assessment (SHA) addresses contamination confirmed on the Cream Wine property only. Remediation activities have been conducted up-gradient at the Valley View and Cream Wine properties, however, soil and groundwater samples were not sampled for the contaminants of concern addressed in this SHA until July 2005. Even then, they were not tested for on a quarterly basis or at all in some wells. Therefore, this SHA does not include review of the "site" (as defined in MTCA) nor does it identify potentially liable parties. The "site" should be defined after further investigations are done to identify the source(s) of contamination and/or a thorough review of the site conditions are completed by an Ecology site manager through the Voluntary Cleanup Program or the formal cleanup process. At that time, the site, for the purpose of this site hazard assessment, may expand to include more than just the Cream Wine property.

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**
Air/Human Health: **n/a**
Groundwater/Human Health: **56.1**

Surface Water/Environmental.: **n/a**
Air/Environmental: **n/a**

OVERALL RANK: 2

WORKSHEET 2
Route Documentation

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

2. **AIR ROUTE** – *Not Scored*

3. **GROUNDWATER ROUTE**

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

TCE, PCE, MTBE

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

Analytical results of groundwater samples confirm the presence of these hazardous substances at levels which exceed Method A cleanup levels.

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

Subsurface soil and groundwater

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

Analytical results confirm the presence of these substances in groundwater.

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	PCE	5	8	800	5	0.01	3	0.8	0.051	4
2	TCE	5	8	2402	3	--	ND	0.8	0.011	4
3										
4										
5										
6										

* Potency Factor

Source: 1, 4

Highest Value: 8

(Max = 10)

Plus 2 Bonus Points? 2

Final Toxicity Value: 10

(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=	1= 1.5×10^2 mg/L = 2
2=	2= 1.1×10^3 mg/L = 3
3=	3= 4800 mg/L = 3
4=	4=

Source: 4

Value: 3

(Max = 3)

1.3 Substance Quantity:	
Explain basis: 100,000 sq ft based on volume of soil in smear zone. Groundwater fluctuates ~4-6ft and the size of the >5 µg/L PCE plume is ~100'x200'	Source: 1,4 Value: <u>6</u> (Max=10)

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	Containment (explain basis): Leaking underground storage tank site with spills and discharges to soil; no cover (gravel)	4	10 (Max = 10)
2.2	Net precipitation: 6-8 inches annually	1, 4	1 (Max = 5)
2.3	Subsurface hydraulic conductivity: silty sand, clayey silt, and silty clay	1	2 (Max = 4)
2.4	Vertical depth to groundwater: 18-21.5 feet bgs	1	8 (Max = 8)

3.0 TARGETS

		Source	Value
3.1	Groundwater usage: public supply, but alternate sources available with minimum hookup requirements		4 (Max = 10)
3.2	Distance to nearest drinking water well: <100 feet		5 (Max = 5)
3.3	Population served within 2 miles: $\sqrt{\text{pop.}} = \sqrt{5616} = 74.9$		75 (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: (0.75)* $\sqrt{198}$ acres = 10.6		11 (Max = 50)

4.0 RELEASE

		Source	Value
	Explain basis for scoring a release to groundwater: Analytical data from groundwater wells		5 (Max = 5)

SOURCES USED IN SCORING

1. Report of Independent Actions, Kennedy/Jenks Consultants, June 17, 2010
2. Site Hazard Assessment Drive-by by Norm Hepner, September 22, 2010
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 State Department of Ecology, Water Rights Application System (WRATS) printout for two-mile radius of site.
6. Washington State Department of Health, Office of Drinking Water Sentry website printout for public water supplies