

SITE HAZARD ASSESSMENT  
WORKSHEET 1  
Summary Score Sheet

**SITE INFORMATION:**

**Colfax Grange Supply Inc Main & Taylor**  
102 East Tyler Street  
Colfax, Whitman County, WA 99111

Section/Township/Range: Sec 14/T16N/R43E  
Latitude: 46° 52' 48"  
Longitude: 117° 21' 35"  
Ecology Facility Site ID No.: 21984243

*Site scored/ranked for the August 22, 2007, update*  
August 103 2007

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

The Colfax Grange Supply Inc Main & Tyler site (hereinafter referred to as Colfax Grange), a "cardrol" fueling facility, is located at 102 East Tyler Street in the northern portion of the city of Colfax, WA, at the southeast corner of Main Street (U.S.Highway 195) and Tyler Street, and within the Palouse River Valley. The main branch of the Palouse River flows south and at its closest point is about 400 feet north of the site; the South Fork Palouse River flows north and at its closest point it is about 600 feet west of the site. The confluence of the two rivers is about 900 feet west-northwest of the site, at which point the general flow is to the west.

In mid-1999, the Jackpot convenience store (now called Food Mart 041) directly to the north across Tyler Street from Colfax Grange and the subject of a separate site hazard assessment (SHA) report, was closed for remodeling. The site owner's (Time Oil) contractor, GeoEngineers, provided oversight during partial removal of petroleum contaminated soils associated with underground storage tanks (USTs) and sumps identified during construction activities. In 2001, seven groundwater monitoring wells (MW1 through MW-7) were installed, with five more wells (MW-8 through MW-12), including four off-site wells (MW-9 through MW-12), in November 2002.

Two of the off-site wells (MW-10 and MW-12) were placed immediately downgradient of the Colfax Grange, directly south across Tyler Street from Jackpot. Analytical results from MW-1 through MW-12 from 2001 though 2006 have shown concentrations of gasoline components benzene, ethylbenzene, toluene, and xylenes (BETX) above their respective Model Toxics Cleanup Act (MTCA) Method A Groundwater Cleanup Levels, as well as significant concentrations of methyl tert-butyl ether (MTBE), although the concentrations specifically at this site have reportedly decreased over time. The highest concentrations typically have been recorded in two "off-site" wells (MW-10 and MW-12) which were in very close proximity, and downgradient, of Colfax Grange.

In September 2004, Colfax Grange contractor Quantum Engineering (Quantum) provided the Washington Department of Ecology (Ecology) Eastern Region Office (ERO) with a work plan to install up to seven groundwater monitoring wells on that site property in order to document groundwater flow and determine if there may be additional upgradient sources of the groundwater contamination documented in the two Tyler Street monitoring wells (MW-10 and MW-12).

Various sampling and soil remediation events were conducted at the site by Quantum during 2004 – 2006, resulting in the documentation of groundwater contamination, at one time or another, by gasoline constituents benzene, ethylbenzene, toluene, and xylenes (BETX) above their respective Model Toxics Cleanup Act (MTCA) Method A Groundwater Cleanup Levels, as well as significant concentrations of methyl tert-butyl ether (MTBE).

The site was added to Ecology's Confirmed and Suspected Contaminated Sites list on August 18, 2006, and the owners were notified on September 13, 2006, that an SHA of the site under MTCA (Chapter 173-340-320) would be conducted. A site visit on June 5, 2007, visually confirmed that the site was totally covered either by building structures or pavement/asphalt cover. No noticeable odors of petroleum products were noted during a thorough walk-around of the property border (other than that normally associated with an operating service station).

Negotiations are underway for an Agreed Order between Ecology and these two parties (Time Oil Company and Colfax Grange Supply Company, Inc) to conduct a Remedial Investigation and Feasibility Study (RI/FS) at these two site properties, which collectively are now referred to as the North Colfax Petroleum Contamination 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 (in the groundwater), the surface water and air routes are not applicable for WARM scoring for this site. Thus, only the groundwater route will be scored, with BETX being the constituents of concern, as this allows the maximum of toxicity points that can be assigned. MTBE would also be a chemical of concern, if necessary for additional scoring points.

**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>36.0</u>		

**OVERALL RANK: 3**

WORKSHEET 2  
Route Documentation

1. **SURFACE WATER ROUTE – 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 – 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: 1,2  
Benzene, ethylbenzene, toluene, xylenes
  
- b. Explain basis for choice of substance(s) to be used in scoring:  
These substances were detected in subsoil and groundwater samples associated with the site in concentrations exceeding their respective MTCA cleanup levels.
  
- c. List those management units to be considered for scoring: Source: 1,2  
Subsurface soils and groundwater.
  
- d. Explain basis for choice of unit to be used in scoring:  
The contaminating substances were detected in subsoil groundwater samples in concentrations exceeding their respective MTCA cleanup levels.

WORKSHEET 6  
Groundwater Route

**1.0 SUBSTANCE CHARACTERISTICS**

<b>1.2 Human Toxicity</b>										
Substance	Drinking Water Standard (µg/L)	Value	Acute Toxicity (mg/ kg-bw)	Value	Chronic Toxicity (mg/kg/day)	Value	Carcinogenicity		Value	
							WOE	PF*		
1 Benzene	5	8	3306	3	ND	-	A=1	.029	5	
2 Ethylbenzene	700	4	3500	5	0.1	1	ND	ND	-	
3 Toluene	2000	2	5000	3	0.2	1	ND	ND	-	
4 Xylenes	10,000	2	50	10	2	1	ND	ND	-	

\* Potency Factor

Source: 1,2,54

**Highest Value: 10**

(Max = 10)

**Plus 2 Bonus Points? 2**

**Final Toxicity Value: 12**

(Max = 12)

<b>1.2 Mobility (use numbers to refer to above listed substances)</b>		
Cations/Anions	OR	Solubility (mg/L)
1=		1= $1.8 \times 10^3 = 3$
3=		2= $1.5 \times 10^2 = 2$
		3= $5.4 \times 10^2 = 2$
4=		3= $2.0 \times 10^2 = 2$

Source: 1,2,4

**Value: 3**

(Max = 3)

<b>1.3 Substance Quantity:</b>	
Explain basis: Unknown, use default = 1	Source: <u>1,5</u> <b>Value: 1</b> (Max=10)

## 2.0 MIGRATION POTENTIAL

		Source	Value
2.1	<b>Containment (explain basis):</b> Contaminated area is covered by a building and parking lot, score as a landfill: 1) No liner = 3; 2) Low permeability cover = 1; 3) No leachate collection system = 2.	1,3,6	<u>6</u> (Max = 10)
2.2	<b>Net precipitation:</b> 14.1" - 3.4" = 10.7"	6	<u>2</u> (Max = 5)
2.3	<b>Subsurface hydraulic conductivity:</b> Silts/sands/gravels	1,2	<u>3</u> (Max = 4)
2.4	<b>Vertical depth to groundwater:</b> Obs. release to groundwater = 0'	1,2	<u>8</u> (Max = 8)

## 3.0 TARGETS

		Source	Value
3.1	<b>Groundwater usage:</b> Public supply, unthreatened alts. avail.	7,8	<u>4</u> (Max = 10)
3.2	<b>Distance to nearest drinking water well:</b> 1,300 - 2640 feet	7,8	<u>3</u> (Max = 5)
3.3	<b>Population served within 2 miles:</b> $\sqrt{2841} = 53.3$	7,8	<u>53</u> (Max = 100)
3.4	<b>Area irrigated by (groundwater) wells within 2 miles:</b> $(0.75) * \sqrt{10} \text{ acres} = 2.4$	7,8	<u>2</u> (Max = 50)

## 4.0 RELEASE

		Source	Value
	<b>Explain basis for scoring a release to groundwater:</b> Confirmed by presence of analytical results.	1,2	<u>5</u> (Max = 5)

## SOURCES USED IN SCORING

1. Groundwater Monitoring Reports for Colfax Grange Supply Company, Inc., Quantum Engineering, 2004 -2006.
2. Correspondence between Colfax Grange Supply Co., Inc. and Doug Ladwig, Washington Department Ecology Toxics Cleanup, Eastern Regional Office, 2004 – 2006.
3. Site hazard assessment site visit by Michael Spencer, Washington Department of Ecology Toxics Cleanup Program, June 5, 2007.
4. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
5. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
6. Washington Climate – Net Rainfall Table
7. Washington State Department of Ecology, Water Rights Application System (WRATS) printout for two-mile radius of site.
8. Washington State Department of Health, Sentry Internet Database printout for public water supplies