

SITE HAZARD ASSESSMENT
WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Site Name: J. H. Kelly Inc
Address: 821 3rd Ave, Longview
Ecology Facility Site ID No.: 74552527
Township/Range/Section: 07 N/02 W/03 WM
Latitude: 46.12657 Longitude: -122.92637

*Site scored/ranked for the February 2016 update
Today's date: January 30, 2014*

SITE DESCRIPTION:

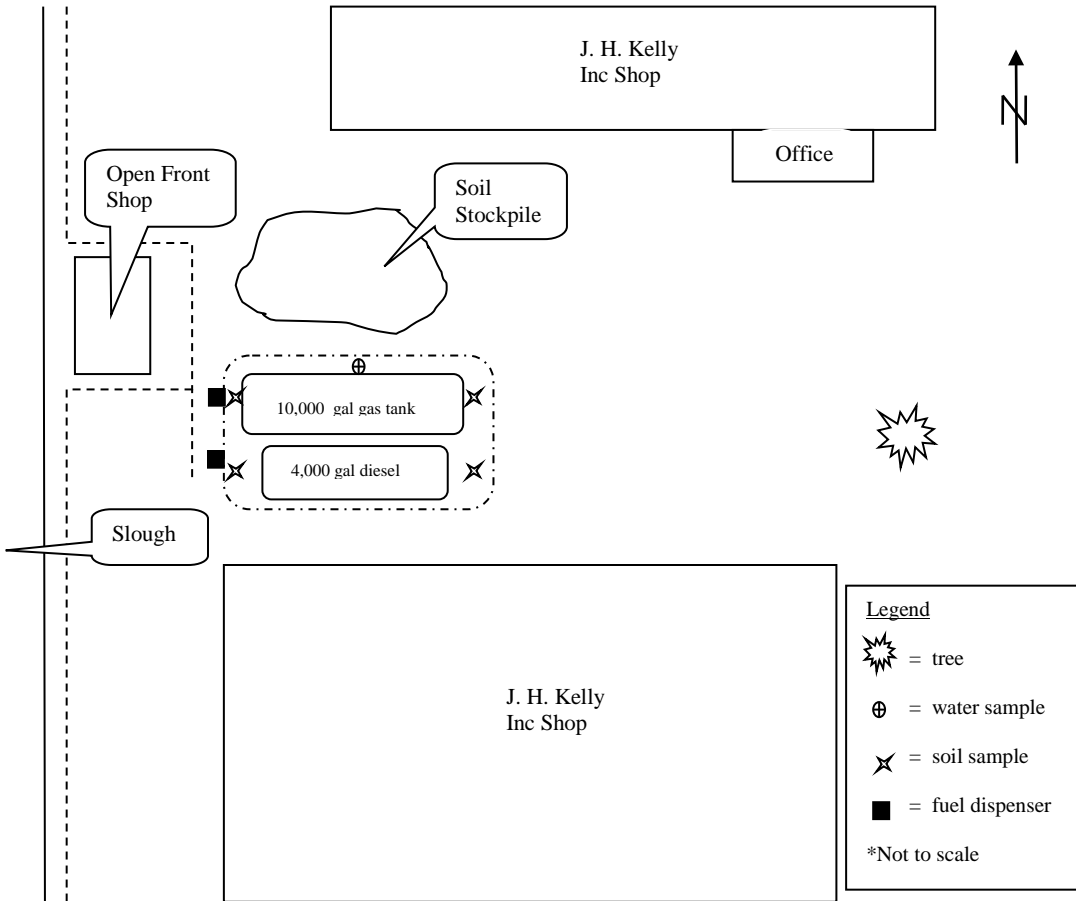
The subject site consists of an irregularly shaped 3.4 acre parcel designated as industrial in an area of Longview zoned for industrial, recreational, and residential uses. The site lies 17 feet above mean sea level with 3rd Avenue provides the eastern boundary for the site. Approximately 730 feet east of the site, beyond 3rd Ave, lies the Cowlitz River. Ditch Number 5 lies adjacent to the property and provides the western boundary for the site. Currently the site operates as a maintenance, fabrication, and contract coordination facility. The site houses two shop buildings, is almost entirely paved, and provides storage for various types of heavy machinery and trailers.

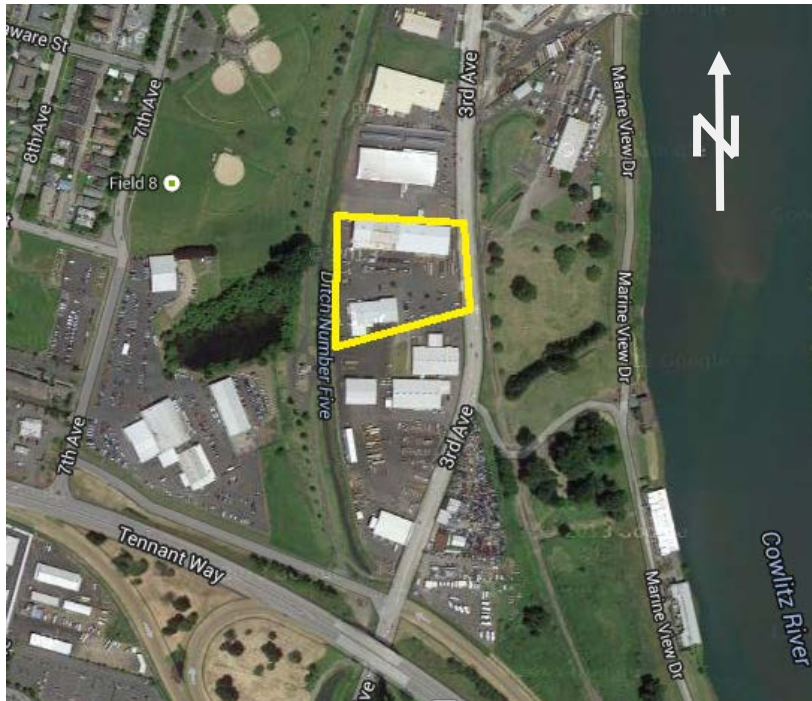
In May of 1991, SRH Group completed a Soil Sampling and Analysis Report. A test pit was completed adjacent to the north edge of a fueling island concrete apron. Soil samples results returned below the MTCA Method A Cleanup Level for TPH (total petroleum hydrocarbon) and no BTEX (benzene, toluene, ethyl benzene, and xylene) was detected.

In December of 1991, Pacific Northern Environmental completed a closure report for the removal of two underground storage tanks (USTs), and the associated fuel dispensers, at the subject site. The two USTs were of 6,000 and 10,000 gallon volumes and contained diesel and unleaded gas. Field screening, conducted of the excavation limits, indicated the presence of petroleum in the excavated soils. Approximately 800 gallons of water were removed from the excavation. Four soil samples and one groundwater sample were collected from the excavation. The soil sample results showed all fractions of petroleum and BTEX below their MTCA Method A Cleanup Levels. The groundwater sample results returned with diesel, gasoline, and BTEX contamination above their respective MTCA Method A Cleanup Levels. A complaint was received through the Washington State Department of Ecology's (Ecology) Environmental Report Tracking System regarding a sheen on water draining to a drainage ditch resulting from run-off water from the excavation.

Groundwater samples were collected, from a monitoring well on site, in January, and June of 1992, and from July of 1993. The groundwater samples show remaining diesel, gasoline, heavy oil, and BTEX contamination in the groundwater at the site above their respective MTCA Method A Cleanup Levels. J.H. Kelly, the property owner, stated in the July 1993 sample results that they saw no reason to continue monitoring the groundwater conditions at the site.

In August of 1993 Ecology sent a letter to J. H. Kelly stating that the status of the site had changed to "Reported Cleaned Up," and that currently Ecology would not be able to change the status of the site to "No Further Action," at that time.





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):

The scope of this Site Hazard Assessment did not include a hydrogeologic survey of the subject site and surrounding area. The groundwater contamination documented or inferred at the subject site is therefore considered to have the potential to impact any well located within the prescribed 2-mile radius and all such wells were used in the scoring process.

The documented contamination on this site is primarily subsurface. The Surface Water and Air routes have not been scored.

The City of Longview Water System, a water system supplied by surface water intakes in the Cowlitz River, is located within two miles of the subject site. This water system was unable to be included into the SHA scoring model due to subsurface soil contamination which is unavailable surface water pathway. The City of Longview Water serves a population of 40,878 residents. This water system is considered to be highly susceptible to contamination.

ROUTE SCORES:

| | |
|--|--|
| Surface Water/Human Health: Not scored | Surface Water/Environmental.: Not scored |
| Air/Human Health: Not scored | Air/Environmental: Not scored |
| Groundwater/Human Health: 75.4 => 5 | |

OVERALL RANK: 2

WORKSHEET 2
Route Documentation

1. SURFACE WATER ROUTE

- 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

- 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
TPH as gasoline (from benzene), TPH as diesel (from naphthalene), toluene, ethyl benzene, xylene, and carcinogenic PAHs

- b. Explain basis for choice of substance(s) to be used in scoring:
Gasoline and xylene will be used due to their presence in groundwater at the site, confirmed through sample analysis.

- c. List those management units to be considered for scoring: Source: 1,2
Spills, discharges, and contaminated soil

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

Spills, discharges, and contaminated soil will be the management unit used for scoring due to the impact caused by leaking underground storage tanks that have been covered with an impervious surface.

WORKSHEET 4
Surface Water Route

1.0 SUBSTANCE CHARACTERISTICS

| 1.1 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 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |

* Potency Factor

Source:
Highest Value:
(Max = 10)
Plus 2 Bonus Points?
Final Toxicity Value:
(Max = 12)

| 1.2 Environmental Toxicity () Freshwater () Marine | | | | |
|---|------------------------------|-------|------------------------------------|-------|
| Substance | Acute Water Quality Criteria | | Non-Human Mammalian Acute Toxicity | |
| | (µg/L) | Value | (mg/kg) | Value |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |

Source:
Highest Value:
(Max = 10)

| | |
|-------------------------------|--|
| 1.3 Substance Quantity | |
| Explain Basis: | Source: Value: (Max = 10) |

2.0 MIGRATION POTENTIAL

| | | Source | Value |
|------------|--------------------------------------|---------------|-----------------|
| 2.1 | Containment Explain basis: | | — (Max = 10) |
| 2.2 | Surface Soil Permeability: | | — (Max = 7) |
| 2.3 | Total Annual Precipitation: | | — (Max = 5) |
| 2.4 | Max 2yr/24hr Precipitation: | | — (Max = 5) |
| 2.5 | Flood Plain: | | — (Max = 2) |
| 2.6 | Terrain Slope: | | — (Max = 5) |

3.0 TARGETS

| | | Source | Value |
|------------|---|---------------|-----------------|
| 3.1 | Distance to Surface Water: | | — (Max = 10) |
| 3.2 | Population Served within 2 miles (see WARM Scoring Manual Regarding Direction): | | — (Max = 75) |
| 3.3 | Area Irrigated by surface water within 2 miles : $(0.75)^{\sqrt{\# \text{ acres}}} =$ | | — (Max = 30) |
| 3.4 | Distance to Nearest Fishery Resource | | — (Max = 12) |
| 3.5 | Distance to, and Name(s) of, Nearest Sensitive Environment(s): | | — (Max = 12) |

4.0 RELEASE

| | |
|----------------|---------------------------------------|
| Explain Basis: | Source: Value: (Max = 5) |
|----------------|---------------------------------------|

WORKSHEET 5
Air Route

1.0 SUBSTANCE CHARACTERISTICS

1.1. Introduction (WARM Scoring Manual) – Please review before scoring

| 1.2 Human Toxicity | | | | | | | | | |
|--------------------|-----------------------------------|-------|--------------------------------------|-------|------------------------------|-------|-----------------|-----|-------|
| Substance | Air Standard (µg/m ³) | Value | Acute Toxicity (mg/ m ³) | Value | Chronic Toxicity (mg/kg/day) | Value | Carcinogenicity | | Value |
| | | | | | | | WOE | PF* | |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

* Potency Factor

Source:
Highest Value:
(Max = 10)
Plus 2 Bonus Points?
Final Toxicity Value:
(Max = 12)

| 1.3 Mobility (Use numbers to refer to above listed substances) | | | | |
|--|--|----------------------------|-------------|-----------------|
| 1.3.1 Gaseous Mobility | | 1.3.2 Particulate Mobility | | |
| Vapor Pressure(s) (mmHg) | | Soil Type | Erodibility | Climatic Factor |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

Source:
Value:
(Max = 4)

Source:
Value:
(Max = 4)

1.4 Highest Human Health Toxicity/ Mobility Matrix Value (from Table A-7)
(Use highest of:)

Final Matrix Value:
(Max = 24)

| 1.5 Environmental Toxicity/Mobility – | | | | | |
|---------------------------------------|--|-------------|-----------------|-------|--------------|
| Substance | Non-human Mammalian Inhalation Toxicity (mg/m ³) | Acute Value | Mobility (mmHg) | Value | Matrix Value |
| 2 | | | | | |
| 6 | | | | | |

Highest Environmental Toxicity/Mobility Matrix Value (Table A-7) = **Final Matrix Value:**
(Max = 24)

| 1.6 Substance Quantity | |
|------------------------|---------------------------------|
| Explain Basis: | Source: Value: (Max = 10) |

2.0 MIGRATION POTENTIAL

| | Source | Value |
|------------------|--------|------------|
| 2.1 Containment: | | (Max = 10) |

3.0 TARGETS

| | Source | Value |
|--|--------|------------|
| 3.1 Nearest Population: | | (Max = 10) |
| 3.2 Distance to [and name(s) of] nearest sensitive environment(s): | | (Max = 7) |
| 3.3 Population within 0.5 miles: | | (Max = 75) |

4.0 RELEASE

| | |
|---|--------------------------------|
| Explain Basis for scoring a release to air: | Source: Value: (Max = 5) |
|---|--------------------------------|

WORKSHEET 6
Groundwater Route

1.0 SUBSTANCE CHARACTERISTICS

| 1.1 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 | TPH as gasoline (from benzene) | 5 | 8 | 3306 | 3 | ND | ND | A | 0.029 | 5 |
| 2 | Xylene | 10,000 | 2 | 50 | 10 | 2 | 1 | ND | ND | ND |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |

* Potency Factor

Source: 1,2,3

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 [Coefficient of Aqueous Migration (K)] | OR Solubility (mg/L) |
| 1= | 1= 1.80E+03 = 3 |
| 2= | 2= 2.00E+02 = 2 |
| 3= | 3 = |
| 4= | 4= |
| 5= | 5= |
| 6= | 6= |

Source: 2,3

Value: 3

(Max = 3)

| |
|--------------------------------|
| 1.3 Substance Quantity: |
|--------------------------------|

| | |
|---|--|
| Explain basis: The substance quantity was based on the total volume of all the USTs documented to have been at the site. A value of 16,000 gallons was used for scoring. | Source: 1,2 Value: 5 (Max=10) |
|---|--|

2.0 MIGRATION POTENTIAL

| | | Source | Value |
|-----|---|--------|------------------------|
| 2.1 | Containment (explain basis): Scored as a landfill with no liner, a compacted soil cover with unknown maintenance, no known collection system, and with disposal of free/bulk liquids | 1,2 | <u>9</u> (Max = 10) |
| 2.2 | Net precipitation: 50.1-60 inches | 2,4,7 | <u>5</u> (Max = 5) |
| 2.3 | Subsurface hydraulic conductivity: Newberg fine sandy loam | 2,7,8 | <u>3</u> (Max = 4) |
| 2.4 | Vertical depth to groundwater: Substances of concern confirmed in the groundwater through sample analysis. | 1,2 | <u>8</u> (Max = 8) |

2.0 TARGETS

| | | Source | Value |
|-----|--|----------|---------------------------|
| 3.1 | Groundwater usage: Public supply; no alternate unthreatened sources available with minimal hookups | 2,5,6 | <u>9</u> (Max = 10) |
| 3.2 | Distance to nearest drinking water well: The nearest well is located approximately 950 feet northeast of the subject site | 2,6,7 | <u>4</u> (Max = 5) |
| 3.3 | Population served within 2 miles: The City of Kelso is served by the Ranney Water System which serves a population of 11,840 residents. The water system is comprised of a system of shallow wells installed into the riverbed of the Cowlitz River. The wells are tidally influenced and are considered to be highly susceptible to contamination. | 2,5,6,7 | <u>100</u> (Max = 100) |
| 3.4 | Area irrigated by (groundwater) wells within 2 miles: (0.75)*√ Approximately 180 acres irrigated by groundwater within two miles of the subject site | 2,7,9,10 | <u>10</u> (Max = 50) |

3.0 RELEASE

| | | Source | Value |
|--|--|--------|-----------------------|
| | Explain basis for scoring a release to groundwater: Substances of concern confirmed in the groundwater through sample analysis. | 1,2 | <u>5</u> (Max = 5) |

SOURCES USED IN SCORING

1. Washington State Department of Ecology Site Hazard Assessment File/TCP file
2. Washington State Department of Ecology, WARM Scoring Manual, April 1992
3. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
4. U.S. Department of Interior Geological Survey Topographical Map
5. Washington State Department of Health, Public Water System Database
6. Washington State Department of Ecology, Water Resources Explorer
7. Cowlitz County GIS map
8. Washington State Department of Agriculture, soil maps
9. Washington State Department of Ecology Water Rights Tracking System
10. GeoCommunicator, Land Survey Information System
11. Washington State Department of Ecology Well Log Viewer
12. Model Toxics Control Act, Statue and Regulation, November 2007