

SITE HAZARD ASSESSMENT
WORKSHEET 1
Summary Score Sheet

SITE INFORMATION:

Site Name: Krasowski Estate Property
Address: 1520 Simpson Ave, Aberdeen
Ecology Facility Site ID No.: 17523493
Section/Township/Range: 17 N/ 09 W/ 06 W. M.
Latitude: 46.97522 Longitude: -123.83477

*Site scored/ranked for the August 2014 update
Today's date: May 28, 2014*

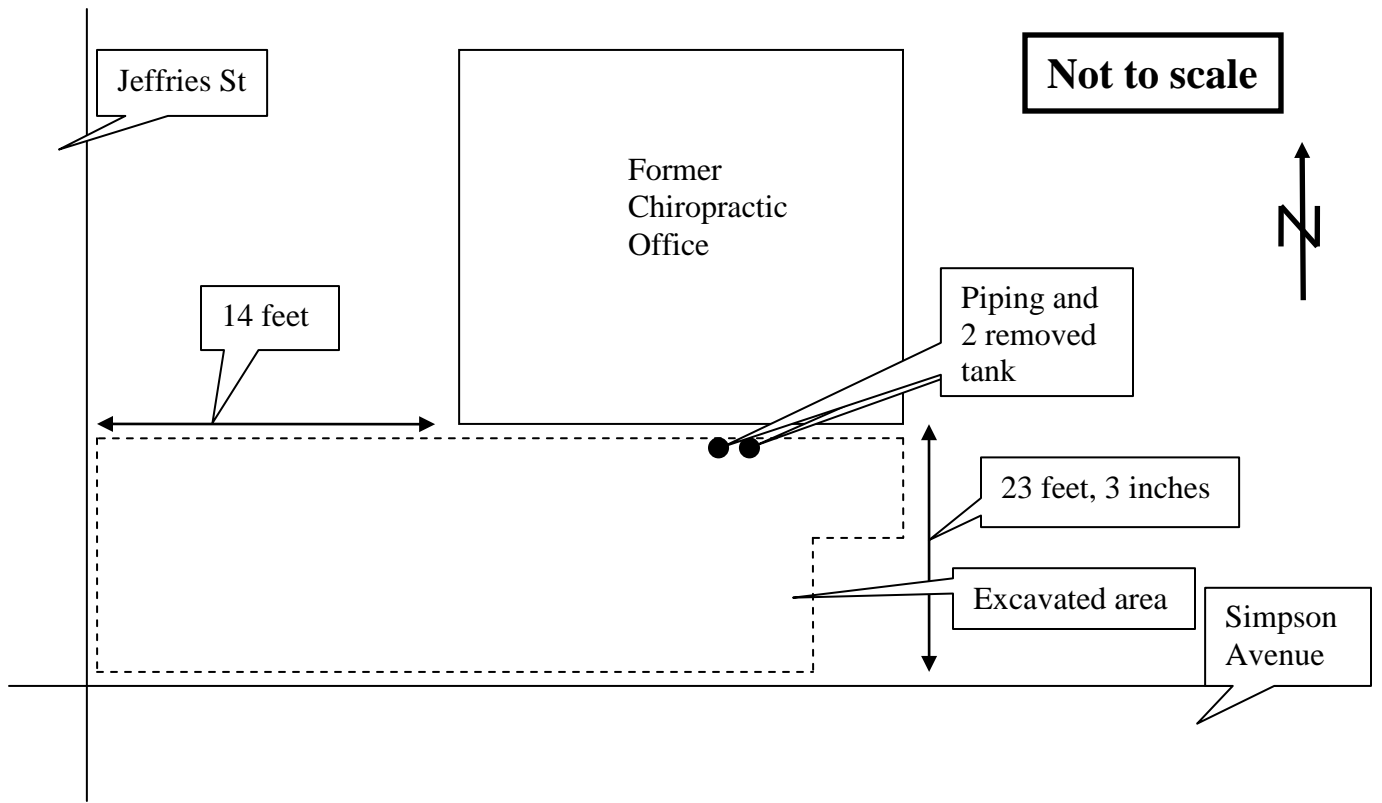
SITE DESCRIPTION:

The subject site consists of a rectangular 0.07 acre parcel designated as “Professional Services” in an area of Aberdeen zoned for commercial and residential use. The site lies 11 feet above mean sea level. Simpson Avenue and North Jeffries Street provide the southern and western boundaries for the site, respectively. The site currently houses a radio station building, and is almost entirely paved. Historically the site housed a service station, a transmission shop, a tune-up garage, and a chiropractic office. Documentation regarding the removal of underground storage tanks (USTs) from the service station operation was not received.

Northwest Testing Company completed a Site Characterization and Independent Remedial Action Report in December 1994. Contaminated soils and two USTs were discovered at the site as a result of due diligence during a property transaction. The two USTs discovered at the site were 25 gallon sediment and water traps. Approximately 120 cubic yards of contaminated soil was removed for disposal. Soil samples collected from the excavation confirmed benzene and gasoline concentrations remained above their respective MTCA Method A Cleanup Levels at the site. The contamination was left in place due to the proximity of a sidewalk and the existing building. Northwest Testing Company estimated a total of 12 cubic yards of contaminated soil was left in place at the site.

Northwest Testing Company completed a Soil Assessment Report in June 1996. The report detailed sample collection from stockpiled contaminated soil removed during the 1994 remedial activities. Three discrete soil samples were collected from the contaminated soil stockpile. The soil sample results returned with gasoline below its laboratory detection level. The soil was used as general fill.

In February 2013, the Washington State Department of Ecology sent a letter to the property owner. The letter stated the status of the site had been changed from “Reported Cleaned Up” to “Cleanup Started.”



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.

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: 41.3 => 4	

OVERALL RANK: 3

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: 1,2,12
TPH as gasoline (from benzene), benzene, toluene, ethyl benzene, and xylene
- b. Explain basis for choice of substance(s) to be used in scoring:
TPH as gasoline will be used as a substance of concern due to its presence in subsurface soil at the site. Xylene will be used as it is a common additive to gasoline and is presumed present with gasoline contamination, unless proven otherwise.
- c. List those management units to be considered for scoring: Source: 1,2,3
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 contaminated subsurface soils and groundwater, verified through sampling and analysis

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)
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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)
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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	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: Quantity cannot be accurately estimated, a value of 1 is assigned	Source: 1,2 Value: 1 (Max=10)
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2.0 MIGRATION POTENTIAL

		Source	Value
2.1	Containment (explain basis): Scored as a landfill with no liner, an impervious 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: 70.1-80 inches	2,4	<u>5</u> (Max = 5)
2.3	Subsurface hydraulic conductivity: Udorthents	2,8	<u>4</u> (Max = 4)
2.4	Vertical depth to groundwater: Groundwater was not encountered during remediation activities but was documented to be 0-14 ft below ground surface	1,2	<u>8</u> (Max = 8)

2.0 TARGETS

		Source	Value
3.1	Groundwater usage: Private supply, but alternate sources available with minimum hookup requirements	2,5,6	<u>4</u> (Max = 10)
3.2	Distance to nearest drinking water well: The nearest well is located approximately 250 feet east of the subject site	2,5,7	<u>5</u> (Max = 5)
3.3	Population served within 2 miles: Approximately 51 residents served by groundwater within two miles of the subject site	2,7,9,10	<u>7</u> (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: $(0.75)^{\sqrt{}}$ Approximately 12 acres irrigated by groundwater within two miles of the subject site	2,7,9,10	<u>3</u> (Max = 50)

3.0 RELEASE

		Source	Value
	Explain basis for scoring a release to groundwater: Documented release to subsurface soils, making substances of concern available to the groundwater route. No documentation received regarding confirmed groundwater contamination	1,2	<u>0</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. Grays Harbor 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