

WORKSHEET 1
Summary Score Sheet
3/28/13

Site Information

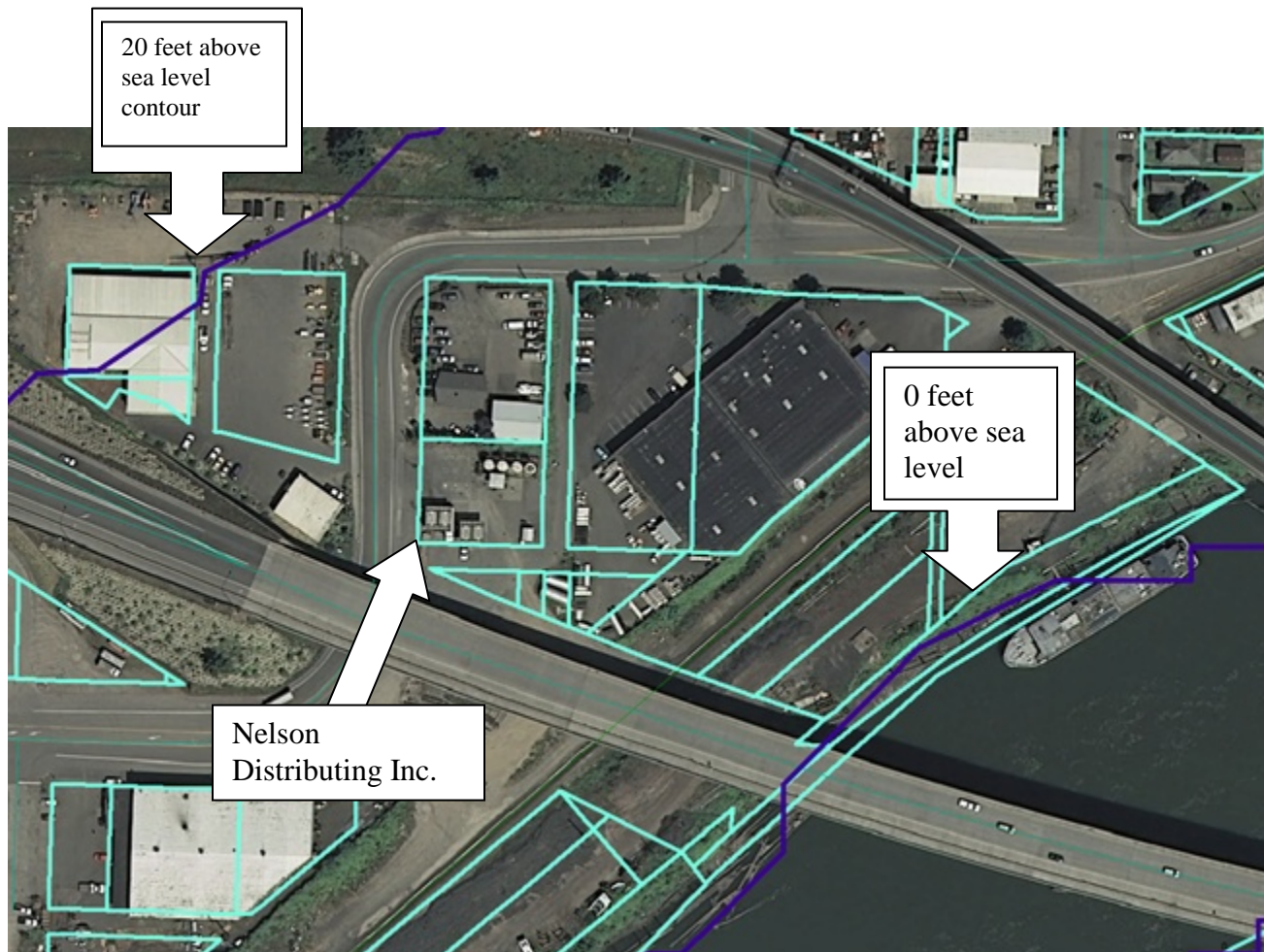
Nelson Distributing Inc.
2815 Highland Ave, Everett, Snohomish County, WA 98201
Section/Township/Range: **20/29/5**
Latitude: 47.97965 Longitude: -122.18508
Facility Site ID: 2782

Site scored/ranked for the August 2013 update of the Hazardous Sites List.

SITE DESCRIPTION:

The Nelson Distributing Facility is located in an industrial park on the east site of Everett, just north for the east bound Highway 2 Overpass/Bridge that crosses the Snohomish River. This fuel distribution facility is in full operation as of the date of this report and is utilizing four 12,000 gallon above ground steel storage tanks for oils, and three 20,000 gallon above ground tanks for diesel. The above ground tanks are uncovered, but are inside a concrete secondary containment structure that drains through an oil water separator to the storm water/sewer system. The facility is reported to have an additional three 12,000 gallon underground storage tanks (UST's), two for gasoline and one for diesel. There are three self service vehicle fueling stations on concrete pads covered with canopies. The property is entirely paved and slopes in a southeasterly direction, runoff is controlled by storm water system that drains through an oil water separator and then to the City of Everett Public Works sewage treatment facility.

Hewitt Avenue is west of the site and turns into California Street, when the two lane street is north of the site. On the other side of California Street, north of the site, is Rubatino Refuse Removal Inc., which is a recycling and solid waste equipment maintenance business. Property to the west of Hewitt is retail equipment rental business signed Atlas Copco with paved parking. Property to the east of the site appears to be a commercial warehouse signed Johnstone Supply (formerly Riverside Beverage). The vacant land south of the site is unpaved and is used as a parking area for trucks (under the highway overpass); part of this area appears to have been used for log sorting area next to the river. There are a couple abandoned ships marooned in the river near this site, which may be in the process of demolition. The closest single family residences and multifamily residences are located on Everett Avenue about 1000 feet north of the site.



Map from Snohomish County GIS 2007 shows property lot lines (light blue) and elevation contour lines (dark blue).

Background

This site was entered onto the Washington State Departments of Ecology's Confirmed and Suspected Contaminated Sites List after a site inspection November 21st, 1991, when surface staining was noticed near the location of the four above ground tanks. After a neighboring environmental site assessment (Riverside Beverage) and subsequent subsurface investigations in 1994, diesel was found above Washington State Model Toxics Control Act Clean up levels WAC 173-340 (MTCA) in three of the nine borings at levels as high as 6,680 mg/kg in soil. Although petroleum was not found in the groundwater, lead was found in the groundwater at 122 ug/L.

In 1998 it was reported that a leaking 6000 gallon tank and contaminated soil was removed from the site, but no documentation of the tank removal and contaminated soil removal was reported to Ecology. In a Google Earth photo from 2002 the site shows that the 4 above ground storage tanks had been relocated to the north property line.

In 2008 a subsurface site assessment report for Nelson Distributing was made at which time they made four soil borings. Three of the four borings showed impact of heavy petroleum with boring #3 having diesel at 2600 mg/kg 8 feet below the surface, which is above the current MTCA. Lead was found at 18 µg/L in boring #1 ground water, which is slightly above MTCA Ground Water, Method A value for lead of 15 µg/L.



Google Earth, 2012 Aerial Photographs of the Site

Note that in a Google Earth photo from 2009 the site shows that 3 new above ground storage tanks had been installed.

Compounds of Concern

The compounds of concern are: Diesel range hydrocarbons and Lead.

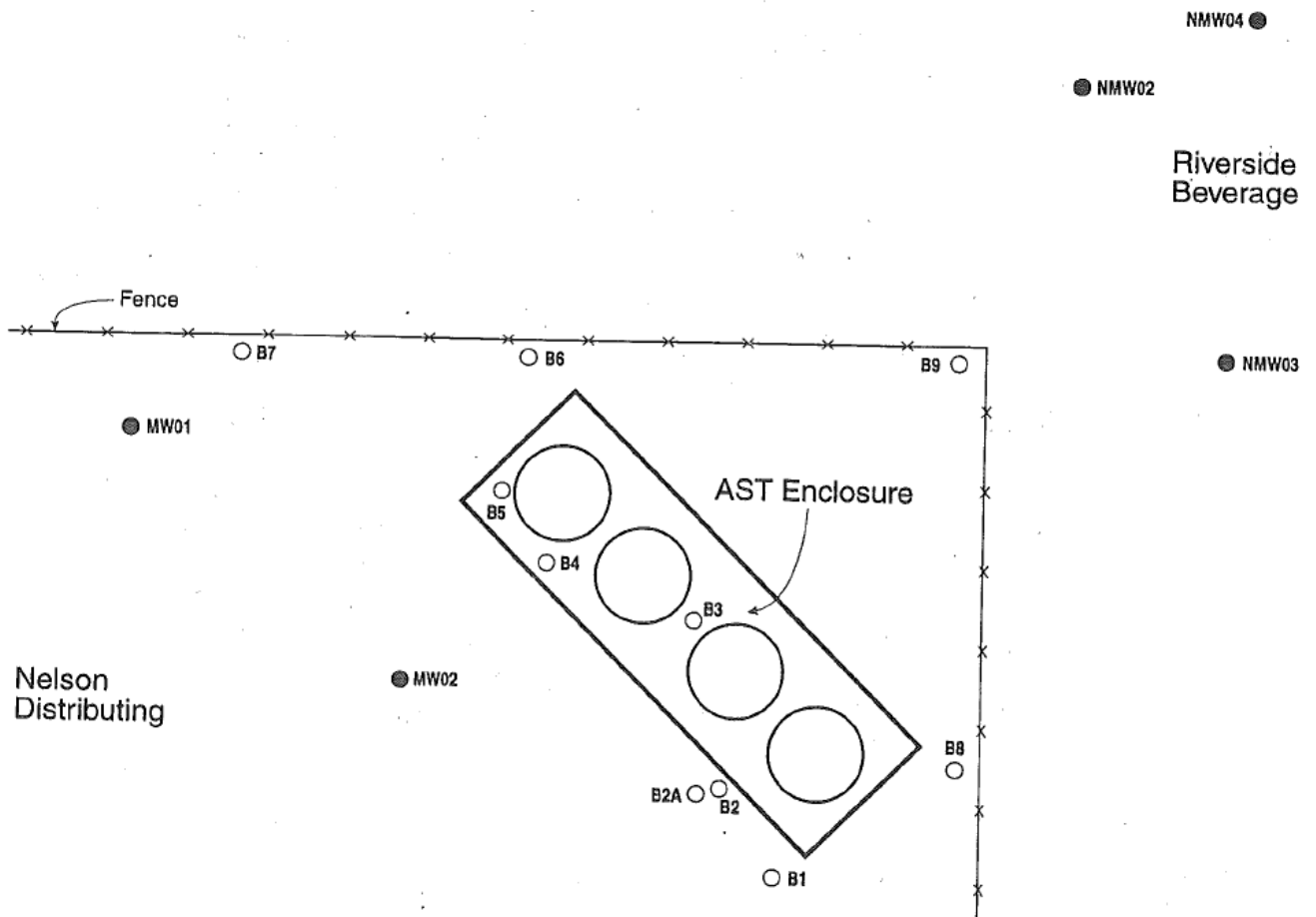
Historical Analytical Data

Samples collected during the 1994 subsurface investigation by Tetra Tech for Nelson Distributing, Inc. Note that B-1 through B-9 are boring installed around the former location of the four above ground tanks in the northeast corner of the property.

TABLE 1. SUMMARY OF
SOIL SAMPLE RESULTS
Nelson Distributing Incorporated
2815 Highland Avenue, Everett, WA

SAMPLE DESIGNATION	COMPOUNDS	
	Diesel	Total Lead
	mg/kg	mg/kg
B1-01-0.5	4,250	91.5
B1-02-7	5,760	13.2
B2-01-1.5	4,850	239
B2-02-6.5	6,680	46.6
B3-01-3.75	266	325
B3-02-7.25	<32.9	11.3
B4-01-4	534	42
B5-01-3.5	2,120	44.9
B5-02-4.5	949	599
B5-03-7.8	<33.2	7.89
B6-01-4.5	4,460	15.1
B6-02-6.25	<33.5	14.6
B7-01-4.75	<37.8	17.2
B7-02-6	<32.3	7.15
B8-01-4.5	<29.4	7.44
B8-02-8.25	<32.6	10.8
B9-01-5.7	<37.3	7.85
NMW01-01S	<33.1	7.24
NMW02-01S	<27.2	<4.95
NMW03-01S	<28.7	<5.00
NMW04-01S	<36.9	20

Shading indicates a concentration reported by the laboratory which exceeds a current action level.



1994 sample location map above. Note that the Above-ground Storage Tanks (AST) enclosure was moved from this location, and is now on the north property line between B7 and B9.

Table below show samples collected during the 2008 subsurface investigation by SD&C for Nelson Distributing, Inc.

Table 1
Laboratory Chemical Analyses Results
For Soil Samples
Nelson Petroleum – 2815 Highland Ave. Everett, WA

Sample ID	Sample Date	WTPH-G (mg/kg, ppm)	WTPH-D (mg/kg, ppm)	WTPH-O (mg/kg, ppm)	Benzene (mg/kg, ppm)	Toluene (mg/kg, ppm)	Ethyl Benzene (mg/kg, ppm)	Xylenes (mg/kg, ppm)	Total Lead (ug/L, ppb)
B-1 @ 8'	8/5/08	<5	<20	<20	<0.02	<0.05	<0.05	<0.05	36
B-2 @ 6'	8/5/08	<5	76	<20	<0.02	<0.05	<0.05	<0.05	27
B-3 @ 8'	8/5/08	<5	2,600	<20	<0.02	<0.05	<0.05	<0.05	29
B-4 @ 8'	8/5/08	<5	550	<20	<0.02	<0.05	<0.05	<0.05	96
MTCA Method A cleanup level		100	2,000	2,000	0.03	7	6	9	250
Method Reporting Limit		5	20	50	0.02	0.05	0.05	0.05	1.0

Notes:

milligrams per kilogram (mg/kg) parts per million (ppm).

<1.0 = not detected at or above the method reporting limit.

N/A = not analyzed

MTCA Method A cleanup levels for groundwater are from Washington Administrative Code (WAC) chapter 173-340 revised 2-12-01.

Soil sample analysis included:

- Gasoline by Ecology method NWTPH-Gx, and BTEX by EPA method 8020;
- Diesel, Kerosene, and Heavy Oil by Ecology Method NWTPH-Dx;
- Total Lead by EPA method 7010; and
- Gasoline Additives MTBE, EDB, and EDC by EPA Method 8260B – all Non-Detectable

Table 2
Laboratory Chemical Analyses Results
For Groundwater Samples
Nelson Petroleum – 2815 Highland Ave. Everett, WA

Sample ID	Sample Date	WTPH-G (ug/L, ppb)	WTPH-D (ug/L, ppb)	WTPH-O (ug/L, ppb)	Benzene (ug/L, ppb)	Toluene (ug/L, ppb)	Ethyl Benzene (ug/L, ppb)	Xylenes (ug/L, ppb)	Total Lead (ug/L, ppb)
B-1	8/5/08	<100	<200	<500	<1	<1	<1	<1	18
B-3	8/5/08	<100	<200	<500	<1	<1	<1	<1	3
MTCA Method A cleanup level		800	500	500	5	1,000	700	1,000	15
Method Reporting Limit		100	200	500	1	1	1	1	2

Notes:

micrograms per liter (µg/L), parts per billion (ppb).

<1.0 = not detected at or above the method reporting limit.

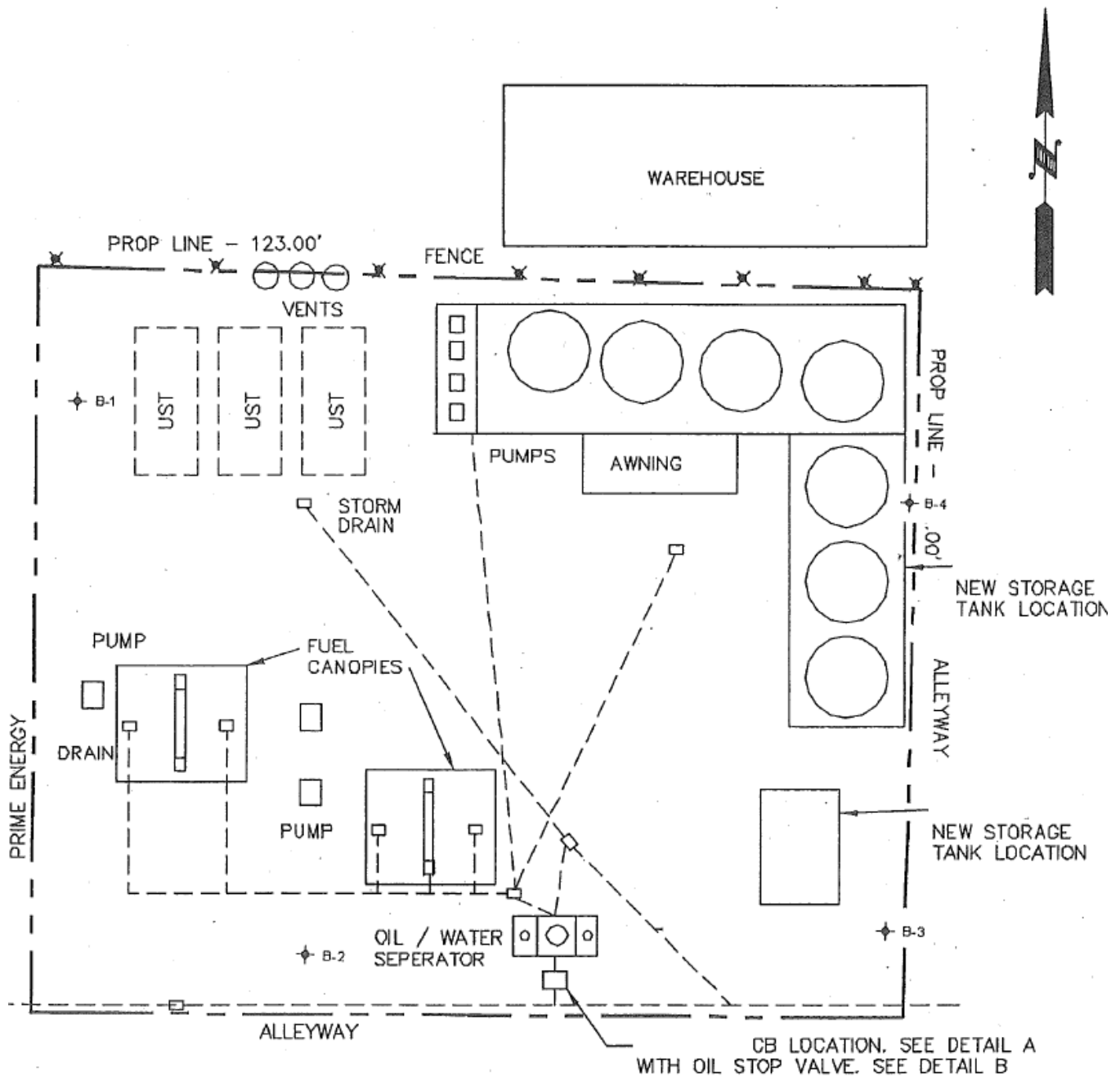
N/A = not analyzed

MTCA Method A cleanup levels for groundwater are from Washington Administrative Code (WAC) chapter 173-340 revised 2-12-01.

Groundwater sample analysis included:

- Gasoline by Ecology method NWTPH-Gx, and BTEX by EPA method 8020;
- Diesel, Kerosene, and Heavy Oil by Ecology Method NWTPH-Dx;
- Total Lead by EPA method 7010; and
- Gasoline Additives MTBE, EDB, and EDC by EPA Method 8260B – all Non-Detectable

Note that the 2008 sample locations B-1 through B-4 are not the same location as 1994 borings. These new borings were installed near the property line.



Sample location map 2008

Soils and Ground water

Soils in this area are reported to be sandy silt, silty gravelly sand from 0 to approximately 8 feet below ground surface, to where there is ground water that flows to the river was first encountered. However, during a site inspection March 27th, 2013 there was no oil staining noticed in any water puddles near the site or around the river bank and no oil was noted in the river, visibility in the river was about 6 feet deep

Obvious improvements have been made to lower soil and ground water contamination potential on this site. A spill at this facility would now be contained because the site is paved and controlled by storm drain system that includes an oil/water separator. For example, a concrete wall now exists around the above ground tanks that drain to the storm drain system.

Surface Water Features

This site is 300 feet from the north bank of the Snohomish River and lies at approximately 15 feet above sea level. Elevation contours shown on the map below that the site is approximately 15 feet above sea level. The 20 feet above sea level contour is northwest of the site and 740 feet from the 0 elevation contour that runs along the river southeast of the site. This gives the area a slope to the Puget Sound is approximately 2.7% to the southeast.

Ground and Surface Water Uses

The site and adjacent properties are served by The Everett Public Utilities. The sources of public water is located well beyond a two mile radius around the site. According to a search of the Water Rights Tracking System there is no land are irrigated within 2 miles of the site by surface water down gradient of the site.

210 well logs were downloaded from Washington State Department of Ecology well log site in the 2 mile radius of the site that were tagged as “Water Wells” under Well Type. However, after review of the well logs they all appear to be de-water construction wells.

Summary/Recommendations

Since the early 1990’s soil and ground water impacts have been documented at the site. Initially, the compounds of concern were diesel range hydrocarbons, and lead. Although some work has been done at this site and improvements made on the surface, the most recent sampling data from 2008 shows diesel range hydrocarbons as high as 2,600 mg/kg found in the soil 8 feet below the surface and lead at 18 ug/L in the ground water near the property line. For these reasons, the Health District recommends Site Hazard Assessment at this site.

SPECIAL CONSIDERATIONS:

The site is completely covered with impervious surface including concrete and asphaltic paving, as well as buildings. All of the aforementioned features, limited surface water from infiltrating the site or human contact with subsurface soils.

ROUTE SCORES:

Surface Water/Human Health:	0	Surface Water/Environmental.:	0
Air/Human Health:	0	Air/Environmental:	0
Groundwater/Human Health:	33.3		

OVERALL RANK: 5

WORKSHEET 2
Route Documentation

1. **SURFACE WATER ROUTE**

- a. List those substances to be considered for scoring: Source: 1
Diesel range hydrocarbons and Lead.
- b. Explain basis for choice of substance(s) to be used in scoring:
Although analytical results from soil sampling indicate the presence of Diesel range hydrocarbons and lead at concentrations which exceed current Method A cleanup levels, there is not contamination at the surface. Therefore this pathway will not be scored.
- c. List those management units to be considered for scoring: Source: 1
Subsurface soils, groundwater.
- d. Explain basis for choice of unit to be used in scoring:
Contamination documented in subsurface soils and ground water only, there was no recent evidence on surface release.

2. **AIR ROUTE**

- a. List those substances to be considered for scoring: Source: 1
Diesel range hydrocarbons and Lead.
- b. Explain basis for choice of substance(s) to be used in scoring:
Although analytical results from soil sampling indicate the presence of Diesel range hydrocarbons and lead at concentrations which exceed current Method A cleanup levels, there is not contamination at the surface. Therefore this pathway will not be scored.
- c. List those management units to be considered for scoring: Source: 1
Subsurface soils, groundwater.
- d. Explain basis for choice of unit to be used in scoring:
Contamination documented in subsurface soils and ground water only, there was no recent evidence on air release.

3. **GROUNDWATER ROUTE**

- a. List those substances to be considered for scoring: Source: 1
Diesel and Gasoline range hydrocarbons and Lead were found in the past, which exceed current Method A cleanup levels.
- b. Explain basis for choice of substance(s) to be used in scoring:
Diesel range hydrocarbons and Lead were found, which exceed current Method A cleanup levels.
List those management units to be considered for scoring: Source: 1
Subsurface soils, groundwater.
- c. Explain basis for choice of unit to be used in scoring:
Analytical results from soil sampling indicate the presence of Diesel range hydrocarbons and lead at concentrations which exceed current Method A cleanup levels. Therefore, this pathway will be scored.

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*	
	TPH as Diesel	6	8	490	5	.004	3	N/A	0	X
	lead	5	8	ND	X	ND	X	B2	0	X

* Potency Factor

Source: 5

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) 3.0E+1 = value of 1

Source: 1, 2, 3

Value: 1
(Max = 3)

1.3 Substance Quantity (volume):	
Explain basis: Volume of the existing UST is 36,000 gallons = value of 6	Source: <u>1, 2, 3, 4</u> Value: <u>6</u> (Max=10)

2.0 MIGRATION POTENTIAL

		Source	Value
2.1	Containment (explain basis): Contamination has been from a leaking underground storage tank, some evidence suggest it has been repaired, but complete documentation was not provided.	1, 2, 3,4	10 (Max = 10)
2.2	Net precipitation: $22.8'' - 5.9'' = 16.9''$	5, 6	2 (Max = 5)
2.3	Subsurface hydraulic conductivity: Sandy silt and silty gravelly sand.	1, 2, 3, 4	3 (Max = 4)
2.4	Vertical depth to groundwater: < 25feet bgs feet as per boring logs	1, 2, 3, 4	8 (Max = 8)

3.0 TARGETS

		Source	Value
3.1	Groundwater usage: Groundwater not used, but useable.	8	2 (Max = 10)
3.2	Distance to nearest drinking water well: <u>approximately 5430</u> feet	8, 9	1 (Max = 5)
3.3	Population served within 2 miles: One public B water system well noted located serving 23 people = $\sim\sqrt{23} = 4.8$	8	4.8 (Max = 100)
3.4	Area irrigated by (groundwater) wells within 2 miles: $(0.75)*\sqrt{\# \text{ acres}} = \underline{0.75 * \sqrt{10} = 2.3}$	7	2.3 (Max = 50)

4.0 RELEASE

		Source	Value
	Explain basis for scoring a release to groundwater: Documented impacts to groundwater	1,2,3,4	5 (Max = 5)

SOURCES USED IN SCORING

1. Phase I Independent Remedial Action Report August 1994 subsurface investigation by Tetra Tech, Inc. for Nelson Distributing, Inc.
2. Subsurface Site Assessment August 10, 2008; investigation by SD&C for Nelson Distributing, Inc.
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 Climate – Net Rainfall Table
6. Washington State Department of Ecology, Online Water Well Log database
7. Washington State Department of Ecology, Water Rights Tracking System (WRTS)
8. Washington State Department of Health, Office of Drinking Water Sentry website printout for public water supplies
9. Western Regional Climate Center’s Historical Climate Information
10. Thomas Guide, Snohomish County, 2010
11. Department Of The Interior, US Geologic Survey, Geologic Map of the Edmonds 7.5 Minute Quad, James P. Minard, 1973
12. Soil Conservation Service, Soil Survey of Snohomish County Area, July 1983
13. Snohomish County Assessors/Treasurers On-line information page
14. Snohomish County GIS mapping information
15. Washington State Department of Ecology Online Environmental Information Management mapping tool
16. Google Earth, 1994-2011 Aerial Photographs of the Site