CSID 5094 NFA

WORKSHEET 1
SUMMARY SCORE SHEET

Note: This document currently has no provision for sediment route scoring.

Site Name/Location (Street, City, County, Section/Township/Range):

Ballard Auto Wrecking
1515 NW Leary Way
Seattle, WA. 98107-4740
King County
T-25N, R-3E, S-12

Site Description (Include management areas, substances of concern, and quantities):

The Ballard Auto Wrecking Facility takes automobiles that are wrecked and dismantles them to sell as used automobile parts. The site is located in an area with other commercial and light industrial businesses. Ballard Auto Wrecking has been in business since 1959. The property is 2/3 of an acre in size and includes retail store space, several covered parts storage areas, a garage area for dismantling automobiles, and outside lot areas for storage of wrecked automobiles. Most of the site sits on a mixture of soil and gravel, with the retail and garage buildings sitting on cement slab. The area is served by municipal sewer and water systems. Drainage of the property can lead to municipal storm drains which are located next to the site.

The largest of the storage areas for wrecked automobiles slopes to a low spot on the property. On the other side of this low spot is the garage for dismantling automobiles. This low area appears to be a collection point for spillage of petroleum and automotive fluids generated at the site. Other locations around the site contain spills of petroleum products. There is also a small above ground storage tank which has a large spill of petroleum products below the tank.

A site hazard assessment(SHA), was conducted on the property by Carsten Thomsen and Carla Gundermann of the King County Health Department on September 11, 1996. Besides backround information about the property obtained from the property owner, 3 soil samples were taken at the site. Two of the soil samples were taken at the low area collection spot, and one sample was taken close to the above ground storage tank. All of the samples were tested for TPH-Diesel(TPH-D), TPH-Gasoline(TPH-G), and Total Metals. Sample 1 (the low area collection site) contained TPH-D levels of 25,000 ppm, TPH-G levels of 180 ppm, Cadmium levels of 26 ppm and Lead levels of 1200 ppm. Sample 2 (also at the low area collection site) had TPH-D levels of 34,000 ppm Cadmium levels of 26 ppm and Lead levels of 1300 ppm. Sample 3 (above ground tank area) had a TPH-D level of 3,800 ppm. All of these results are above the Model Toxics Control Act(MTCA) cleanup levels.

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 site hazard assessment of the Ballard Auto Wrecking Site showed surface water leaving the site. Based on the chemicals found that are above the MTCA cleanup levels, this site will be scored for groundwater, surface water, and air routes.

ROUTE SCORES:

Surface Water/Human Health:17.1

Surface Water/Environ.:44.2

Air/Human Health:32.1

Air/Environmental:23.4

Ground Water/Human Health:25.7

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OVERALL RANK: 2

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source: 8,9

TPH-Diesel	Lead
TPH-Gasoline	Cadmium

Explain basis for choice of substance(s) to be used in scoring.
Concentrations of all above substances where determined to be above Method A cleanup levels.

List those management units to be considered for scoring: Source: 8
Drainage collection area/above ground storage tank area

Explain basis for choice of unit to be used in scoring. Source: 8
Spills/drainage to ground

2. AIR ROUTE

List those substances to be considered for scoring: Source: 8,9

TPH-Diesel	Lead
TPH-Gasoline	Cadmium

Explain basis for choice of substance(s) to be used in scoring.
Concentrations of all above substances where determined to be above Method A cleanup levels.

List those management units to be considered for scoring: Source: 8
Drainage collection area/above ground storage tank area

Explain basis for choice of unit to be used in scoring. Source: 8
Spills/drainage to ground

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 8,9

TPH-Diesel	Lead
TPH-Gasoline	Cadmium

Explain basis for choice of substance(s) to be used in scoring.
Concentrations of all above substances where determined to be above Method A cleanup levels.

List those management units to be considered for scoring: Source: 8
Drainage collection area/above ground storage tank area

Explain basis for choice of unit to be used in scoring.
Spills/drainage to ground

WORKSHEET 4
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.TPH-Gasoline	1000	8	3306	3	----	ND	A	.029	5
2.TPH-Diesel	1000	6	490	5	.004	ND	--	--	--
3.Lead	5.0	8	---	ND	---	ND	B2	ND	ND
4.Cadmium	5.0	8	225	5	.0005	5	B1	ND	ND
5.									
6.									

*Potency Factor

Source: 2
Highest Value: 8 (Max.=10)

+2 Bonus Points? 2

Final Toxicity Value 10 (Max.=12)

1.2 Environmental Toxicity

(X) Freshwater
( ) Marine

Substance	Acute Water Quality Criteria (ug/l)	Value
1.LEAD	82	6
2.Cadmium	3.9	8
3.TPH-Diesel	2300	2
4.TPH-Gasoline	5300	2
5.		
6.		

Non-human Mammalian Acute Toxicity (mg/kg) Value

Source: 2 **Value: 8** (Max.=10)

1.3 Substance Quantity: 125 FT2 Source: 8 **Value: 4** (Max.=10)

Explain basis:
Contaminated area
(12'x3')+(8'x8')+(5'x5')=125 FT2

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 8 **Value: 10** (Max.=10)

Explain basis: no control/cover

2.2 Surface Soil Permeability: clay/sand/gravel Source: 8 **Value: 5** (Max.=7)

2.3 Total Annual Precipitation: 18.7 inches Source: 3 **Value:** 2 (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1-2 inches Source: 7 **Value:** 2 (Max.=5)

2.5 Flood Plain: no flood plain Source: 6 **Value:** 0 (Max.=2)

2.6 Terrain Slope: <2 % Source: 8 **Value:** 1 (Max.=5)

3.0 TARGETS

3.1 Distance to Surface Water: >1000-2500 Ft Source: 8 **Value:** 7 (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): √pop.=√ = n/a Source: 5 **Value:** 0 (Max.=75)

3.3 Area Irrigated within 2 miles 0.75√no. acres= n/a
(Refer to note in 3.2.): 0.75√ =0.75( )= Source: 5 **Value:** 0 (Max.=30)

3.4 Distance to Nearest Fishery Resource: >1000-2500Ft Source: 8 **Value:** 9 (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) >1000-2500 Ft (Fishery resource) Source: 8 **Value:** 9 (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: Source: 8 **Value:** 0 (Max.=5)

No confirmed release

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 (ug/m^3)	Val.	Acute Toxicity (mg/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.TPH-Gasoline	.12	10	31947	3	---	ND	A	.029	5
2.TPH-Diesel	166.5	4	---	ND	---	ND	-	-	ND
3.Cadmium	.00056	10	25	10	---	ND	B1	6.1	6
4.Lead	.5	10	---	ND	---	ND	B2	-	ND
5.									

*Potency Factor

Source: 2
Highest Value: 10 (Max.=10)

+2 Bonus Points? 2
Final Toxicity Value: 12 (Max.=12)

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility
Vapor Pressure(s) (mmHg): 1=1.8E+03; 2=8.2E-02; Source: 2
3= ; 4= ; 5= ; 6= Value: 4 (Max.=4)

1.3.2 Particulate Mobility
Soil type: silt/clay/loam Source: 8
Erodibility: 38 Value: 1 (Max.=4)
Climatic Factor: 1-10

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals **Final Matrix Value: 24** (Max.=24)

1.5 Environmental Toxicity/Mobility Source: 2

Substance	Non-human Mammalian Acute Inhal. Toxicity (mg/m^3)	Value	Mobility (mmHg)	Value	(Table A-7) Matrix Value
1.Cadmium	25 (mouse/rat)	10	<10E-05	1	5
2.TPH-Gasoline	31947 (rat)	3	>10	4	6
3.					
4.					
5.					

Highest Environmental Toxicity/Mobility Matrix Value (From Table A-7) equals **Final Matrix Value: 6** (Max.=24)

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.6 Substance Quantity: 125 sq ft Source: 8 **Value: 2** (Max.=10)
Explain basis: contaminated areas

2.0 MIGRATION POTENTIAL

2.1 Containment: None Source: 8 **Value: 10** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: >1000-2000 FT Source: 8 **Value: 8** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Gilman Park >2000-3000 FT Source: 8 **Value: 5** (Max.=7)

3.3 Population within 0.5 miles: √pop.=√600=24 Source: 8 **Value: 24** (Max.=75)

4.0 RELEASE

Explain basis for scoring a release to air: Source: 8 **Value: 0** (Max.=5)
None

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	WOE	Carcino-genicity PF*	Val.
1.TPH-Diesel	1000	6	490	5	.004	ND	-	-	5
2.TPH-Gasoline	1000	8	3306	3	-	ND	A	.029	5
3.Lead	50	8	--	ND	-	ND	B2	ND	ND
4.Cadmium	5.0	8	225	5	.0005	5	B1	ND	ND
5.									
6.									

*Potency Factor

Source: 2
Highest Value: 8 (Max.=10)

+2 Bonus Points? 2
Final Toxicity Value: 10 (Max.=12)

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions: 1= ; 2= ; 3=2 ; 4=3 ; 5= ; 6= . Source: 2 **Value: 3** (Max.=3)

OR
Solubility 1= 1; 2= 3; 3=2 ; 4=3 ; 5= ; 6= .

1.3 Substance Quantity: 14 cubic yds Source: 8 **Value: 2** (Max.=10)
Explain basis: 125 Sq Ft area x 3 FT deep =375 cu FT =14 cu yds

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 8 **Value: 10** (Max.=10)
Explain basis: Spill to soil

2.2 Net Precipitation: 18.7 inches Source: 3 **Value: 2** (Max.=5)

2.3 Subsurface Hydraulic Conductivity: silt/clay Source: 8 **Value: 2** (Max.=4)

2.4 Vertical Depth to Ground Water: 9-13 feet Source: 10 **Value: 8** (Max.=8)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: Not used Source: 5 **Value: 2** (Max.=10)

3.2 Distance to Nearest Drinking Water Well: ≥10,000 ft Source: 4 **Value: 0** (Max.=5)

3.3 Population Served within 2 Miles: √pop.=√ = 0 Source: 4 **Value:** 0 (Max.=50)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75√no.acres= 0 Source: 5 **Value:** 0 (Max.=100)
0.75√ =0.75 ( )=

4.0 RELEASE

Explain basis for scoring a release to ground water: None Source: 8 **Value:** 0 (Max.=5)

SOURCES USED IN SCORING

1.WARM Scoring Manual April, 1992

2.Toxicology database for use in Washington ranking method scoring

3.National Weather Service data

4.Wa. State Dept. Of Health Public Water Supply Listing

5.WA. State water use data

6.Sensitive areas map folio. King County WA. 1990

7.Isopluvials of 2-Yr, 24-Hr precipitation. NOAA atlas 2, Vol IX

8.Site hazard assessment, King County Health Dept. 9/11/96

9.Model Toxics Control Act regulations

10.SHA of NW Market Street site

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