CSID 4265

WORKSHEET 1
SUMMARY SCORE SHEET

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

Glenn's Diesel
14779 State Route 9
Skagit County Parcel 24750
SE ¼ SW ¼ Section 14, Township 34 North, Range 4 East
Latitude 48 25 50, Longitude 122 15 43 DMS,
FSID: 26541964

Owner: Georgia Schopf
1207 Jameson
Sedro Woolley, WA 98284

Contact: Glenn McGoff
14779 State Route 9
Mt. Vernon, WA 98273

1.

Site ranked/scored for February 26, 2002 Site Register by Polly Dubbel, Skagit County Health Department

1. Site Description/History

Glenn's Diesel is a diesel truck repair shop located just to the west of the Nookachamps River near the intersection of College Way and State Route 9 in Skagit County. The site has been leased by Glenn McGoff for approximately 17 years and is reported to have been an auto repair business for 15 years prior to that. The business occupies the northeastern portion of Skagit County Parcel P24750. The remainder of the parcel is forested with one single family residence near the center of the parcel. The Nookachamps Creek runs along the eastern portion of the parcel. The area of the repair business is level land that drops steeply directly behind the repair shop to an old railroad grade. The bank is approximately 20 feet high. There is then another smaller rise of land between the old railroad grade and the river. Surface drainage from the repair business would tend to flow down the bank and then to the northeast down to the creek. The business area of the property consists of a large metal shop building with a concrete floor and five work bays. The floor is intact; there are no below ground tanks or hydraulic hoists. There is a waste oil collection drum in the building and a parts cleaning station that uses standard cleaning solvent. In front of the building, to the west, an asphalt apron extends approximately 15 feet for the length of the building. At the south end of this apron trucks are pressure washed with cold water. Wash down from this activity would extend onto unpaved gravel parking area. The remainder of the business area is gravel parking over soil. Approximately 20 large diesel trucks are parked around the gravel area interspersed with piles of metal objects and tires. At the rear of the south side of the building a 500 gallon above ground storage tank for used oil is located. This tank was used in the past for all used oil storage and currently may still be used when the drums are full. The tank sits on bare ground and has heavy staining on both sides. The tank is not covered and has no secondary containment. Immediately adjacent to Glenn's Diesel to the northwest is the Big Rock Grocery and Gas Station, under different ownership. Glenn's Diesel is not served by any water system. Rain water is collected for truck washing and they use a port-a-potty for sanitation. The Big Rock Grocery is served by Skagit PUD. There are two small public water systems relying on groundwater potentially down-gradient of the site.

The first complaint on this site was received by Ecology in March 1998. An anonymous caller stated that the shop degreased engines and the water would run off to the east to grass and gravel leading to the ground being black in this area. The caller also stated that un-emptied diesel tanks and parts were scattered throughout the yard. Ecology performed site visits in May and July of 1998 and January of 1999. Soil and pavement staining was noted during these visits. There were waste oil above ground storage tanks at the rear of the building and batteries and drums stored outside. A report noted problems due to poor management practices. Glenn's Diesel was placed on Ecology's list of confirmed and suspected contaminated sites in 1999. Britt Pfaff and Polly Dubbel from Skagit County Health Department conducted a site visit on December 3, 2001. The description in the first paragraph is based on this site visit. Glenn McGoff, operator of Glenn's Diesel was present during the site visit. Glenn was not aware that he had any outstanding issues with Ecology or aware of any contamination issues at the site. He stated that the trucks parked around the property should not have any fluids in them, in fact most were empty shells. He has his waste oil drum removed by a company on a regular basis (possibly Vintage Oil). The concrete floor of the building

and the asphalt apron did have staining. Fresh gravel was on the surface of the unpaved area and no significant staining was seen here.

Britt Pfaff and Polly Dubbel conducted sampling at the site on December 18, 2001. Soil samples were taken from 5 locations. Samples were analyzed at Anatek Labs of Moscow, Idaho for NWTPH – Dx, PAH (method 8270), and Total Metals (method 6020). A copy of sample results is attached and summarized in the table below. This sample event indicated that soils in the truck wash area and used oil tank area have been impacted by contamination. Refer to attached map for approximate sample locations.

Special Considerations

Carcinogenic PAH and Lead toxicities are used in the ranking of the site to provide for a conservative evaluation of the site risk. The sample results for these parameters from the very limited SHA soil sampling were very close to the Method A Unresticted Land Use clean-up values.

SUMMARY OF SAMPLE DATA – GLENN'S DIESEL DECEMBER 18, 2001*

ID	LOCATION	MATRIX	DEPTH	NWTPH-Dx mg/kg	PAH mg/kg	METALS mg/kg
S01	TRUCK WASH AREA	SOIL	8-12"	Lube Oil **6970**	Chrysene 0.07 Phenanthrene 0.06 Pyrene 0.08	Arsenic 6.6 Barium 171 **Cadmium 7.7** Chromium 52.2 **Lead 266** Selenium 0.803
S02	SE ASPHALT PAD	SOIL	12"	Lube Oil 384	ND	Arsenic 5.1 Barium 35.5 Chromium 51.4 Lead 20.0 Selemium 1.3
S03	WEST PROPERTY BOUNDARY	SOIL	6"	ND	ND	Arsenic 6.2 Barium 113 Chromium 59.8 Lead 9.2 Mercury 0.06 Selenium 1.0
S04	WEST SIDE USED OIL TANK	SOIL	12"	Diesel 67.5 Lube Oil 393	Anthracene 0.06 Benzo(k)fluoroanthene 0.06 Benzo(b)fluoroanthene 0.05 Benzo(a)anthracene 0.11 Benzo(a)pyrene 0.09 Chrysene 0.10 Fluoranthene 0.17 Phenanthrene 0.25 Pyrene 0.18	Arsenic 7.2 Barium 48.3 Chromium 38.6 Lead 36.0 Selemium 1.2
S05	SOUTH SIDE USED OIL TANK	SOIL	2"	Diesel **2110** Lube Oil **122,000.0**	Acenaphthene 0.22 Anthracene 0.11 Benzo(b)fluoranthene 0.08 Fluoranthene 0.06 Pyrene 0.39	Arsenic 3.2 Barium 51.0 Cadmium 3.6 Chromium 33.9 Lead 58.9 Selenium 0.9

*ND indicates all parameters for the analysis were not detected, where parameters detected only those detected are listed.

Route Scores

Surface Water/Human Health:	~~22.7~~	Surface Water/Environment:	~~60.1~~
Air/Human Health:	~~3.8~~	Air/Environmental:	~~15.3~~
Ground Water/Human Health	26.9		

Overall Rank

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source: 1,3
Heavy oil, Carinogenic PAHs, Lead, Cadmium

Explain basis for choice of substance(s) to be used in scoring.
Substances measured in surface soil above MTCA method A unrestricted land use standards.

List those management units to be considered for scoring:
Contaminated surface soil.

Explain basis for choice of unit to be used in scoring.
Documented surface soil contamination.

2. AIR ROUTE

List those substances to be considered for scoring: Source: 1,3

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 1,3
Heavy oil, Carcinogenic PAHs, Lead, Cadmium

Explain basis for choice of substance(s) to be used in scoring.
Substances measured in soil above MTCA Method A standards for unrestricted land use.

List those management units to be considered for scoring:
Contaminated soil.

Explain basis for choice of unit to be used in scoring.
Documented soil contamination

WORKSHEET 4

SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. Heavy Oil	X	X	X	X	X .63	1	X	X	X
2. PAHs	0.2	10	50 (rat)	10	X	X	B2	12	7
3. Lead	5	8	X	X	X	X	B2	X	X
4. Cadmium	5	8	225 (rat)	5	0.0005	5	X	X	X

*Potency Factor

Source: 1,3.4
Highest Value: 10 (Max.=10)

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

1.2 Environmental Toxicity

(X) Freshwater
( ) Marine

Substance	Acute Water Quality Criteria (ug/l)	Value	Non-human Mammalian Acute Toxicity (mg/kg)	Value
1. Heavy Oil	X	X	X	X
2. PAHs	X	X	50	10
3. Lead	82	6	X	X
4. Cadmium	3.9	8	225	5

Source: 2,3,4,6,7 Value: 10 (Max.=10)

1.3 Substance Quantity: quantity unknown
Explain basis: unknown, default to 1

Source: 1,2,3 **Value: 1** (Max.=10)

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment No containment — Source: 1,3 — **Value: 10** (Max.=10)
Explain basis: Contaminated soil present at surface, no run on/run off control

2.2 Surface Soil Permeability: Gravelly-loam — Source: 3,11 — **Value: 1** (Max.=7)

2.3 Total Annual Precipitation: 45.2 inches — Source: 3,8 — **Value: 3** (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1-2 inches — Source: 3 — **Value: 2** (Max.=5)

2.5 Flood Plain: Not in flood plain — Source: 3,12 — **Value: 0** (Max.=2)

2.6 Terrain Slope: 5% — Source: 3,9 — **Value: 2** (Max.=5)

3.0 TARGETS

3.1 Distance to Surface Water: 173 feet — Source: 3,13 — **Value: 10** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): pop.=0 = 0 — Source: 3,7,5 — **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles 0.75√no. acres = (Refer to note in 3.2.): 0.75√290=13 — Source: 3,5 — **Value: 13** (Max.=30)

3.4 Distance to Nearest Fishery Resource: Nookachamps Creek — Source: 3,13,10 — **Value: 12** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Nookachamps Creek — Source: 3,13,10 — **Value: 12** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: No documented release — Source: 1,2,3 — **Value: 0** (Max.=5)

WORKSHEET 5
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual) - Please review before scoring

1.2 Human Toxicity

Substances	Air Standard (ug/m^3)	Val.	Acute Toxicity (mg/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. Lead	0.5	10	X	X	X	X	B2	X	X
2. Cadmium	0.00056	10	25	10	X	X	B1	6.1	6

*Potency Factor

Source: 1,2,4,5,6
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

Henry's Law: 1= 2= 3= 4= 5=

Source: 4,5
Value: (Max.=4)

1.3.2 Particulate Mobility

Soil type: silt loam
Erodibility: 47
Climatic Factor: 1 – 10

Source:
Value: 1 (Max.=4)

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals

Final Matrix Value: 6 (Max.=24)

1.5 Environmental Toxicity/Mobility

Source: 5

Substance	Non-human Mammalian Inhal. Toxicity (mg/m^3)	Acute Value	Particulate Mobility	Value	(Table A-7) **Matrix Value**
1. Lead	X	X	X	X	
2. Cadmium	25	10	1	1	~~6~~ 5

Highest Environmental Toxicity/Mobility Matrix Value
(From Table A-7) equals **Final Matrix Value: ~~6~~ 5** (Max.=24)

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.6 Substance Quantity: Unknown Source: 1,2,4 **Value: 1** (Max.=10)
Explain basis: quantity unknown, use default of 1

2.0 MIGRATION POTENTIAL

2.1 Containment: None demonstrated, spills to surface Source: 1,2,3,4 **Value: 10** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: businesses, homes within 1000 feet Source: 4 **Value: 10** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) wetlands 1100 feet Source: **Value: 6** (Max.=7)

3.3 Population within 0.5 miles: 21houses/buildings within ½ mile = √63 people Source: 4,13 **Value: 8** (Max.=75)

4.0 RELEASE

Explain basis for scoring a release to air: No documented release Source: 1,2,3,4 **Value: 0** (Max.=5)

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. Heavy Oil	X	X	X	X	X	1	X	X	X
2. PAHs	0.2	10	50	10	X	X	B2	12	7
3. Lead	5	8	X	X	X	X	B2	X	X
4. Cadmium	5	8	225	5	0.0005	5	X	X	X

*Potency Factor

Source: 1,3
Highest Value: 10 (Max.=10)

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

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions: 1= ; 2= ; 3=0.1-1.0 (2) ; 4=>1 (3) ; 5= ; 6= . Source: 3,4 **Value: 3** (Max.=3)

OR
Solubility(mg/l): 1=0 ; 2=0 ; 3= , 4= ; 5= ; 6= .

1.3 Substance Quantity: Unknown Source: 1,2,3 **Value: 1** (Max.=10)
Explain basis: quantity unknown, default to 1

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 1,2,3 **Value: 10** (Max.=10)
Explain basis: contaminated soil

2.2 Net Precipitation: 24.8 inches Source: 3,8 **Value: 3** (Max.=5)

2.3 Subsurface Hydraulic Conductivity: Clay, clay and gravel Source: 3,6 **Value: 1** (Max.=4)

2.4 Vertical Depth to Ground Water: well on site drilled to 400', other wells 1/3 miles north 60' Source: 3,6 **Value: 4** (Max.=8)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: public supply, alternative source available Source: 3,5,6 **Value: 4** (Max.=10)

3.2 Distance to Nearest Drinking Water Well: 600-700 ft Source: 3,6,13 **Value: 4** (Max.=5)

3.3 Population Served within 2 Miles: $\sqrt{235}=15$ Source: 3,5,6,7 **Value: 15** (Max.=50)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: $0.75\sqrt{42}= 5$ Source: 3,5 **Value: 5** (Max.=100)

4.0 RELEASE

Explain basis for scoring a release to ground water: no documented release Source: 1,2,3 **Value: 0** (Max.=5)

SOURCES USED IN SCORING

1. Skagit County Health Department, Site Hazard Assessment, Field Notes and Sample Results for Glenn's Diesel, December, 20001.
2. Washington Department of Ecology, Initial Investigation Reports and Information, April 1998 – September 1999.
3. Washington Department of Ecology, WARM Scoring Manual, April, 1992.
4. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January, 1992.
5. Washington Department of Ecology, Water Rights Information System (WRIS), 1997.
6. Washington Department of Ecology, Well Logs
7. Washing Department of Health Public Water Supply Data.
8. National Weather Service, Washington Climate Data.
9. USGS 7.5 minute Topographical Quadrangles – Mount Vernon, Washington.
10. Skagit County Planning and Permit Center, Critical Areas Maps.
11. United States Department of Agriculture, Soil Conservation Service, Soil Survey of Skagit County Area, Washington, September 1989.
12. Skagit County GIS and Mapping, FEMA Data, 100 Year Flood Plain Shape File, Skagit County Skagit View Version 1.03.02, 2001.
13. Skagit County GIS and Mapping Department, Skagit County Digital Ortho Photographs, 2001, Skagit County Skagit View Version 1.03.02, 2001.