CSID 588

Site Hazard Assessment
Summary Score Sheets
July 15, 2005

Site Name:	James Auto Service	Section: Township: Range	29 27N 4E
Site Address	21000 70th Ave W	Ecology Facility Site ID	7572498
City: County: State: Postal Code:	Edmonds Snohomish WA 98026	ERTS	536287
Lat:	47 - 48 - 30.74		
Long:	122 – 19 – 39.87		

1. Site Summary:

James Auto located at 21000 70th Ave W. Edmonds will here after be referred to as the site. The site is located on the eastern edge of the City of Edmonds, approximately one-half mile south of Edmonds Community College. The site resides in what appears to be a light industrial area. However, single-family homes and multifamily structures exist within a block of the site to the west, northwest and directly north of the site.

The site exists on a hill that slopes generally to the south. The covered shop area slopes to the north to a central drain area. A trough is formed down the center of a paved area along an east west orientation. Drainage in the paved area appears to move to a central storm collection system located on the western portion of the site, then to a vault with oil/water separators, and then to the city of Edmonds sewer/storm water system.

On May 5, 2000, Todd Moles of the City of Edmonds Storm Water Unit conducted a site visit for a scheduled detention system inspection located at 21020 - 70th, property adjacent to the site. Mr. Moles noted that the owners of **21020** - 70th had disconnected the site from the detention system. As a result Mr. Moles investigated the site and found it to be out of compliance. Mr. Moles found the site to be illegally discharging to the city storm water system via an illegal pump and pipe system.

Three years later, on April 16, 2003, the city issued a notice and order to correct to James Auto.

On September 22, 2003, Encore Excavating was called to the site to excavate the trench and underground detention vault areas. At the time of the excavation, subsurface contamination,

noted by petroleum sheen on soils and water, was encountered on the western portion of the site. Todd Moles and Mark Brown of Encore Excavation witnessed the contamination.

The City of Edmonds and Encore did not collect samples of the contaminated soils observed at the time of the September 22, 2003, site visit. Todd Moles noted at the time that the catch basin had no bottom. It is unclear if this means that there is bare soil at the bottom the catch basin without any sort of containment barrier. Subsequent site investigations on June 14, 2005, by the Snohomish Health District revealed that the bottom of the catch basin is lined with some sort of barrier. A metal probe was inserted to the catch basin in several areas. All areas probed met resistance consistent with that of a concrete base.

As a result of the observed contamination, Washington Department of Ecology (Ecology) entered the site on the Confirmed Suspected Contaminated Sites (CSCS) list with ERTS # 536287 on October 7, 2003.

A telephone conversation with Mark Brown of Encore Excavation on May 31, 2005, revealed that no petroleum-contaminated soil was removed from the site. No further excavation was conducted to further characterize the observed contaminated soils. Mr. Brown did note that that he observed contamination on the western portion of the property.

A telephone conversation on May 31, 2005, with Mr. Moles confirmed that soil contamination had been observed on the western portion of the property in the excavation for the new vault. Mr. Moles was unsure if any clean up had been conducted at the site beyond the addition of the detention vaults and drainage lines.

Mr. Moles noted the City of Edmonds has had no further problems with illegal discharges from the site.

Surface Water and Ground Water Features

There are numerous surface water features within two miles of the site. Hall creek is down gradient of the site at 2000 feet to the southeast. An unidentified lake is located on the Edmonds Community College Campus 3440 feet to the north of the site. Hall Lake is 4200 feet to the southeast of the site. Hall Lake is down gradient of the site. Chase Lake is 6000 feet to the south west of the site. It is roughly at the same elevation as the site. Scriber Lake is northeast of the site at 6600 feet. It is slightly down gradient of the site but exists on the east side of State Route 99. Swamp creek flows to the southeast from Scriber Lake. Lake Ballinger is due south of the site at 7700 feet. It is down gradient of Hall Lake.

Ground and Surface Water Uses

None of the aforementioned surface water features are used for drinking water sources. Public water is supplied to the site by the City of Edmonds. The City of Edmonds acquires water from the city of Everett and the City of Seattle water systems. Both water systems do not have sources within two miles of the site. The City of Lynnwood maintains two wells located at the Edmonds community college for irrigation uses.

The Alderwood water district exists with in two miles of the site. However, Alderwood acquires water from the city of Everett water system. A well belonging to the Alderwood water district was discovered in a well log search. However, after examining the well log, it appears that the well is not for domestic or municipal use.

The Olympic View Water District uses water from Deer Creek Springs, Deer Creek Wells and Deer Creek Surface Water. These sources appear to be in Section 35 of Range 3E, Township 27N, and outside the two mile radius from the site. However, Olympic does maintain a Municipal well with in the two-mile radius of the site at NW ¼, NE ¼, Section 31, Township 27N, Range 4E. Olympic View Water serves a population of 14,522 residents.

Exposure/Population

According to the USEPA web based environmental information tool located at http://www.epa.gov/enviro/wme/index.html, the population using the .33-mile view is 18251 with a density of 5369.89 people per square mile. Using the .65-mile view yields a population density of 4915.24 people per square mile and a total population of 66,331. The average density of the two views is 5142.57 per square mile. Assuming that the density is uniform throughout the .25 miles area around the site, and using .19635 miles squared as the area of a .25-mile radius, then the estimated population in a .25-mile area around the site is calculated to be 1009.74 people. As previously noted a population in excess of 10,000 is served by ground water with in a two-mile radius of the site. The site of the Olympic view well is more than one mile to the southwest of the site.

Exposure to contaminants at the site is not likely from air or surface water routes due to the fact that most of the site is paved. The property adjacent to the west is paved as well. A fence restricts access to the site. Exposed soils are limited to a strip approximately 25 feet long by 18 inches wide along the west side of the property.

Recent Sampling Events

The Health District conducted a site visit on June 14, 2005. At the time of the site visit, two soil samples were collected. The samples were collected in an area located approximately twelve inches away from the catch basin located on the western portion of the property. This area was selected for two reasons. The first is that all areas that would appear to be good sampling locations are covered with concrete or asphalt. The second reason is that records indicated that the catch basin historically in this area has been problematic. The area also appeared to be a low area on the property where, potentially, surface water may have infiltrated without treatment.

For these reasons the Health District selected the sample location. A hole eighteen inches deep was excavated using a standard posthole digger.
Soils from zero to eighteen inches below ground surface (bgs) appeared to be gray and mottled. Soils excavated from the hole had an apparent petroleum odor.

One discrete sample was collected at eighteen inches bgs from the bottom of the elevation. A second sample was collected from eight inches bgs.

Analyses included NWTPH Dx and metals (Cd, Cr, and Pb.) Simple jar packing methods were used for the aforementioned analysis. Soil was collected in 4oz glass jars and sealed with Teflon coated lids. EPA Method 5035A using no-void collection with a modified syringe and extrusion into an empty VOA bottle was used for collection of NWTPHGas/BTEX samples. All samples were collected and placed on ice and shipped Edge Analytical.

Sample locations were photographed and a GPS unit was used to determine the latitude and longitude of the location. The GPS location of the sample site was, N 47°48.502' W122°19.653.

Compounds of Concern and Sampling Results

James Auto SHA Soil Sampling June 14, 2005			
Analysis	MTCA Method A Cleanup Level	J-1	J-2
NWTPH Dx	2000	ND	ND
NWTPH Gas	30/100mg/kg	**727**	336
NWTPH Heavy Oils	2000 mg/kg	**7960**	540
Benzene	.03	ND	ND
Ethylbenzene	3	0.7	ND
Toluene	7	ND	ND
Xylene	9	4.12	ND
Total Cadmium	2	**3.54**	1.41
Total Chromium	19	35.2	35.4
Total Lead	250	*232*	*63.9*
All results noted in mg/kg ND = Non-Detect Bold type indicates MTCA exceedance Italics indicates that level is approaching the MTCA limit			

Areas of Impact

Areas of impact appear to be soil. Ground water or wet soils were not encountered during the site visit conducted on June 14, 2005.

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):

For this SHD only the ground water route was considered. The reason for this limitation was that the SHD felt that the exposure to surface water or air routes was limited due to the physical and historical characteristics of the site. No surface water was observed at the site. All surface water that falls to the site is routed through a collection and treatment system then discharged to the Edmonds sewer system. The site is largely paved or covered by a building. A small strip

approximately 18 inches wide by 25 feel long. The Health District recognizes that this is unprotected soil. However, due to the size and protected location of the strip, the Health District felt that generally a population would not be granted the type of access, digging on private property, which was required for exposure. No surface staining was ever observed.

The Health District could not account for contamination in other areas due to pavement (extending east from the sample site) and the property line (immediately west of the sample site) on the western portion of the property. However, the record indicates that representatives of the City of Edmonds and Encore Excavating observed contamination in the subsurface.

ROUTE SCORES:

Surface Water/Human Health:	NS	Surface Water/Environ.:	NS
Air/Human Health:	NS	Air/Environmental:	NS
Ground Water/Human Health:	49.7		

OVERALL RANK: 3

WORKSHEET 2 - ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

Surface water route not scored.

2. AIR ROUTE

Air route not scored.

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source:1,2

NWTPH Gasoline range hydrocarbons, NWTPH Heavy Oils and Cadmium.

Explain basis for choice of substance(s) to be used in scoring.

Analytical results from soil samples showed concentrations greater than their respective Method A MTCA cleanup levels for all of the above.

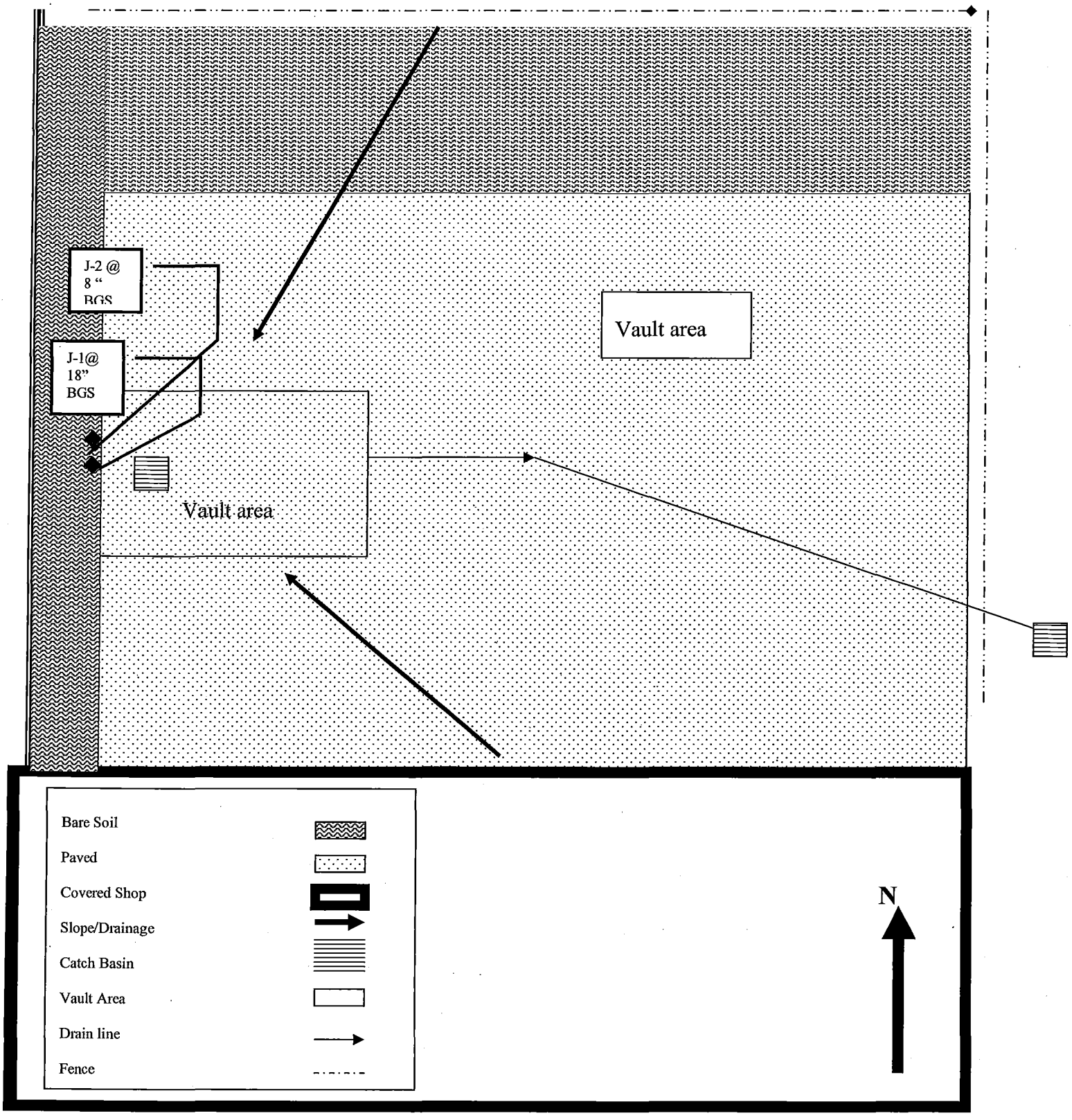
List those management units to be considered for scoring: Source:1,2

Contaminated on-site in subsurface soils.

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

Chemical analyses of on-site surface soils indicated significant concentrations of NWTPH Gasoline range hydrocarbons, NWTPH Heavy Oils and Cadmium.

James Auto Site Map
June 10, 2005



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/da	Val.	Carcinogenicity WOE	PF	Val.
1	Cadmium	5	8	225	5	0.0005	5	B1	ND	X
2	TPH Gx BTEX	5	8	3306	3	ND	x	A	0.029	5
3	TPH Dx Heavy oil	ND	X	ND	X	2	1	ND	ND	X

Source: 1, 2, 3
Highest 8
2 Bonus 2
Final Toxicity Value: **10**

1.2 Mobility (Use numbers to refer to above listed substances) Source: 1, 2, 3 Value: 3
Cations/Anions Cd mobility value is 3

OR
Solubility (mg/l) TPH Gasoline 1.8E=03 Value of 3

1.3 Substance Quantity Unknown Quantity use Default of 1 Source: 1, 2, 3 Value: 1
Explain basis:

2.0 MIGRATION POTENTIAL

2.1 Containment Release to soils Source: 1, 2, 3 Value: 10
Explain basis:

2.2 Net Precipitation: 22.8-5.9= 16.9 inches Source: 1, 2, 3, 4 Value: 2

2.3 Subsurface Hydraulic Conductivity: 10-7 to 10-5 Source: 1, 2, 3, 8 Value: 2

2.4 Vertical Depth to Ground Water: 26-50 feet Source: _____ Value: 6

WORKSHEET 6
GROUND WATER ROUTE

3.0 TARGETS

3.1	Ground Water Usage:	Public and Private Supply with minimal hookup	Source: 7, 9, 10	Value: 4
3.2	Distance to Nearest Drinking Water Well:	> 5000 feet to Olympic View well	Source: 9,	Value: 1
3.3	Population Served within 2 Miles:	> 10,000	Source: 13	Value: 100
3.4	Area Irrigated by (Groundwater) Wells within 2 miles:	.75(sq. Rt 83)	Source: 6, 7, 9,	Value: 7

4.0 RELEASE

Explain basis for scoring a release to ground water: No confirmed release to ground water

Source: 1, 2, 3 Value: 0

Sources Used in Scoring

1. Washington Department of Ecology and SHD, "James Auto Initial Investigation File."

2. Washington Department of Ecology, WARM Scoring Manual, April, 1992.

3. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.

4. National Weather Service, Washington Climate Data, Snohomish County

5. U.S.G.S. Topo. Map, Edmonds Quad., 7.5 Min. Series, Photorev. 1973.

6. Washington Department of Ecology, Water Rights Application Tracking System

7. Washington Department of Health, SADIE

8. Soil Conservation Service, Soil Survey of Snohomish County Area, July 1983.

9. Washington Department of Ecology, Online Well Log Search

16 Department Of The Interior, US Geologic Survey, Geologic Map of the Edmonds 7.5 Minute Quad, James P. Minard, 1985

11. Snohomish County Aerial Photograph, S20 /T27N /R4E, 1947-2003.

12 Thomas Guide, 2004

13 USEPA web based environemtal information tool located at http://www.epa.gov/enviro/wme/index.html

14 Hydrometeorological Design Studies Center web page for NOAA Atlas 2, http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm