CSID 2437

WORKSHEET 1
SUMMARY SCORE SHEET

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

Padilla Heights Rd Property
9655 Padilla Heights Rd
Anacortes, WA 98221
NW ¼, SE ¼, Section 03, Township 34 North, Range 02 East
Skagit County parcel P19702
FSID 7443386

Skagit County Parcel and Owner:

Skagit County Parcel P19702

Owner:	Occupant:
Kenneth D. Johnson	Terry Tidrington
P.O. Box 32478	1211 – 19th Street
Bellingham, WA 98228	Anacortes, WA 98221

Site ranked/scored for August 24, 2005 Site Register by Polly Dubbel, Skagit County Health Department

Site Description/History

The Padilla Heights Rd Property site originally came to the attention of the Skagit County Health Department (Health Department) and the Washington Department of Ecology (Ecology) when law enforcement officials confiscated an illegal methamphetamine drug lab on the property on November 7 and 8, 2001. Due to the evidence found at the site by law enforcement, the Health Department declared the site as Unfit for Use on November 16, 2001. The site was entered into the Environmental Response Tracking System by Ecology Spill Response after they assisted with chemical removal from the drug lab confiscation. The Initial Investigation Report on the site was completed by the Health Department in April of 2002 and the site was subsequently placed on the Confirmed and Suspected Contaminated Sites list by Ecology.

The property consists of approximately 0.90 acres on a relatively flat upland area of Fidalgo Island between Padilla Bay to the northeast and Similk Bay to the southwest. The parcel is immediately bordered by an auto wrecking yard to the north, a heavy equipment contractor to the east and south and a residential property to the west. The area in general is a mix of industrial, business, residential, and open land. The Swinomish Reservation is approximately ½ mile to the south. The area is served by the City of Anacortes Water System although 9655 Padilla Heights is not connected to the City of Anacortes water supply. The site has one metal frame building currently vacant due to the Unfit for Use order, a small wood frame building housing a well and water treatment facilities placed on the property in 1956 by former owner Public Utility District #1 of Skagit County (PUD), and approximately 40 junk vehicles including travel trailers. The property has on site septic.

The property was originally owned by the PUD and the well on the property planned to serve as a public drinking water supply for the area. This did not come to pass and the property was eventually sold. In 1995 the property was purchased by Ronald Johnson who operated a furniture refinishing business at the site. On the death of this owner in 1999 the property went to his brother Kenneth who rented it to John Chandler, the occupant at the time of the drug lab confiscation. In 2002 Terry Tidrington reported to the Health Department that he had negotiated a Contract for Deed for ownership of the property with Ken Johnson. Skagit County Auditor records show Ken Johnson as the current owner. Mr. Tidrington has used the property to store various trucks and business supplies for his contractor business. The metal frame building has remained unoccupied.

Mr. Tidrington has allowed the Health Department access to the property on multiple occasions. The Health Department had concerns over potential dumping of chemicals from the drug lab operation on soil and into the septic system. A burn pile was evident to the north of the shop building. There were also many car batteries stored on bare ground next to the well house and an area of heavy oil staining near the shop building at the base of a 55 gallon drum and in the gravel driveway of the shop building. There were also drums on the property apparently filled with solvents used in furniture stripping. Soil samples were taken by the Skagit County Health Department on two occasions related to potential drug lab contamination and poor practices with motor vehicle wastes.

On June 5, 2002 the Health Department planned to sample the contents of the septic tank, the well water, soil in areas of the burn pile and the battery storage area. The soil near the battery storage area and the burn pile had been disturbed and scraped into piles. In the driveway leading to the shop building new gravel had been placed. One composite soil sample was taken in the battery storage area and one composite soil sample in the former burn pile area. The battery storage soil was analyzed for total metals using EPA Method 6010B, the burn pile soil was analyzed for TPH HCID, PAHs, and total metals. Since the soil in the area of both samples had been recently disturbed prior to sampling, as noted above, the results are of questionable value. At this same time the surface liquid of the septic tank and the well water were sampled and analyzed for volatile organic compounds (Method 8260B), and total metals. Results from the sampling are attached. No soil results exceeded MTCA Method A clean up levels. The well water had significant levels of lead (0.494mg/L) and copper (1.17mg/L), however, this is not likely indicative of the water itself. Well water flowed through the old unused treatment and storage facility prior to the sample tap and likely was contaminated with lead and copper from the PUD equipment in place since the 1950s and not regularly in use. The septic tank surface liquid contained significant levels of lead (0.044mg/L), xylene (7980ug/L), ethylbenzene (1440ug/L), and toluene (13970ug/L).

Piles of soil were present at the site, presumably scraped from the driveway, the battery storage area, and the burn pile area. On July 15, 2002 the Health Department returned to the site and did a limited screening of soil from these piles using a photo-ionization detector (PID). No detections were made above background on the PID and no further soil samples were taken at that time.

On May 23, 2003 the Health Department returned to the site to re-sample the septic tank liquid according to new protocols and sample drain field soil. Liquid was drawn from the middle of the septic tank using a sludge judge and analyzed using Method 8260B. Levels of xylene, ethylbenzene, and toluene remained elevated although at a much lower level than the prior surface liquid sample. Drainfield soil was sampled just below the drainfield rock layer at 1.5 – 2 feet depth in two locations and analyzed for total metals (6010B) and volatile organics (8260B). There were no detections over MTCA Method A levels in the soil. Results are attached. No further soil or water samples have been taken at the site. To this date the Health Department has received no evidence that the septic tank has been pumped as directed or that any of the stained soil or the drums have been removed from the site. Mr. Tidrington reported that full drums have been stored in a closed storage trailer and he considers them new, usable product and not waste.

Special Considerations

The well water is not considered contaminated in the scoring as the most likely source of the lead and copper is the old water system equipment and piping. Septic tank contaminants are considered in the air and ground water routes as the tank vents to air and contaminants may have been released to the drainfield soil from the tank.

Route Scores

Surface Water/Human Health:	4.4	Surface Water/Environment:	NS
Air/Human Health:	4.3	Air/Environmental:	15.5
Ground Water/Human Health	15.8		
		Overall Rank	**5**

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source: 1,2,3
Heavy oil

Explain basis for choice of substance(s) to be used in scoring.
Heavy oil visibly present on ground surface at site

List those management units to be considered for scoring: Source: 1,2,3
Contaminated surface soil

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

2. AIR ROUTE

List those substances to be considered for scoring: Source: 1,2,3
Ethylbenzene, toluene, xylene

Explain basis for choice of substance(s) to be used in scoring.
Substances found to be significantly present in septic tank on property.
Septic tank has been vented to air.

List those management units to be considered for scoring: Source:

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

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 1,2,3
Heavy oil, ethylbenzene, toluene, xylene

Explain basis for choice of substance(s) to be used in scoring.
Heavy oil contamination visible on ground surface, other substances present
In septic tank and were likely released to drainfield in past.

List those management units to be considered for scoring: Source: 1,2,3
Surface and subsurface soil

Explain basis for choice of unit to be used in scoring.
Units of likely contamination from substances

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	1		X	X	X

*Potency Factor

Source: 1,3,4
Highest Value: 1 (Max.=10)

+2 Bonus Points?
Final Toxicity Value 1 (Max.=12)

1.2 Environmental Toxicity – Bioassay data used, supercedes chemical data, maximum value assigned

( ) Freshwater
(X) Marine

Substance	Acute Water Quality Criteria (ug/l)	Value	Non-human Mammalian Acute Toxicity (mg/kg)	Value
1. Heavy oil	X	X	X	X

Source: 1,3,4, Value: NS (Max.=10)

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

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment: None — Source: 1,3,4 — **Value: 10** (Max.=10)
Explain basis: Spill to surface, no run-on/run-off control

2.2 Surface Soil Permeability: sand and gravel — Source: 3,6,7 — **Value: 1** (Max.=7)

2.3 Total Annual Precipitation: 25.7 inches — Source: 3,8 — **Value: 2** (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 2.0 inches — Source: 3,8 — **Value: 2** (Max.=5)

2.5 Flood Plain: Not in flood plain — Source: 1,3,11 — **Value: 0** (Max.=2)

2.6 Terrain Slope: 140'/2379' x 100% = 6% — Source: 1,3,9 — **Value: 3** (Max.=5)

3.0 TARGETS

3.1 Distance to Surface Water: 2379' — Source: 1,3,9,11 — **Value: 7** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): pop.=0 = 0 — Source: 1,3,10,11 — **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles 0.75√no. acres =
(Refer to note in 3.2.): 0.75√0 =0.75(0)= 0 — Source: 1,3,5,11 — **Value: 0** (Max.=30)

3.4 Distance to Nearest Fishery Resource: Padilla Bay, 2379' — Source: 1,3,11 — **Value: 9** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Padilla Bay 2379 ft — Source: 1,3,11 — **Value: 9** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: No documented release to surface water — Source: 1,3 — **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. ethylbenzene	1448.6	1	X	X	X	X	X	X	X
2. toluene	1248.8	1	X	X	0.57	1	X	X	X
3. xylene	1448.6	1	21714	3	0.085	1	X	X	X
4.									
5.									

*Potency Factor

Source: 1,2,3,4
Highest Value: 3 (Max.=10)

+2 Bonus Points? ---
Final Toxicity Value: 3 (Max.=12)

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

1.3.1 Gaseous Mobility
Vapor Pressures (mmHg) : 1= 7 (3), 2= 28 (4), 3=10 (3)

Source: 1,3,4
Value: 4 (Max.=4)

1.3.2 Particulate Mobility
Soil type:_____
Erodibility:_____
Climatic Factor:_____

Source:
Value: (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: 1,2,3,4

Substance	Non-human Mammalian Inhal. Toxicity (mg/m^3)	Acute Value	Mobility ($atm-m^3/mol$)	(Table A-7) Value	**Matrix Value**
1. ethylbenzene	X	X	7.0	3	X
2. toluene	X	X	28	4	X
3. xylene	21714	3	10	3	6
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: approximately 500 gallons of dilute solution Source: 1,3 **Value: 2** (Max.=10)
Explain basis: Used volume of contaminated septic tank

2.0 MIGRATION POTENTIAL

2.1 Containment: Underground septic tank, no vapor collection system Source: 1,3 **Value: 5** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: Immediately adjacent, residences and a business Source: 1,3,11 **Value: 10** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Freshwater emergent wetlands 1000-1500 feet Source: 1,3,12 **Value: 6** (Max.=7)

3.3 Population within 0.5 miles: From building count, approximately 32 buildings Source: 1,3,11 **Value: 10** (Max.=75)
32 buildings x 3 people per building = 96, value = $\sqrt{96} = 10$

4.0 RELEASE

Explain basis for scoring a release to air: No documented release to air Source: 1,3 **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. ethylbenzene	700	4	3500	3	0.1	1	X	X	X
3. toluene	2000	2	5000	3	0.2	1	X	X	X
4. xylene	10000	2	50	10	2	1	X	X	X
5.									
6.									

*Potency Factor

Source: 1,2,3,4
Highest Value: 10 (Max.=10)

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

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

OR
Solubility(mg/l): 1=0 ; 2= 150 (2) ; 3= 540 (2) , 4=200 (2)

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

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 1,3 **Value: 10** (Max.=10)
Explain basis: Spill to surface and release to subsurface drainfield
)

2.2 Net Precipitation: 11.0 inches Source: 1,3,8 **Value: 2** (Max.=5)

2.3 Subsurface Hydraulic Conductivity: clay, 10^{-7} Source: 1,3,7 **Value: 1** (Max.=4)

2.4 Vertical Depth to Ground Water: 136' Source: 1,3,7 **Value: 3** (Max.=8)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: public supply, alternative source available Source: 1,3,10,11 **Value: 4** (Max.=10)

3.2 Distance to Nearest Drinking Water Well: well on site, 0' Source: 1,3 **Value: 5** (Max.=5)

3.3 Population Served within 2 Miles: $\sqrt{45} = 7$ Source: 1,3,7,10,11 **Value: 7** (Max.=50)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: $0.75\sqrt{2.5} = 1.18$ Source: 1,3,5,11 **Value: 1** (Max.=100)

4.0 RELEASE

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

SOURCES USED IN SCORING

1. Skagit County Health Department, 9655 Padilla Heights RD file, 2001-present.
2. Washington Department of Ecology, Model Toxics Control Act, Washington Administrative Code 173-340, 1996.
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. United States Department of Agriculture, Soil Conservation Service, Soil Survey of Skagit County Area, Washington, September 1989.
7. Washington Department of Ecology, Well Logs.
8. National Weather Service, Washington Climate Data.
9. USGS 7.5 minute Topographical Quadrangles – Anacortes South.
10. Washing Department of Health Public Water Supply Data.
11. Skagit County Mapping, SkagitView 3.0, 2004.
12. United States Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, June 2005.