WASHINGTON RANKING METHOD

ROUTE SCORES SUMMARY AND RANKING CALCULATION SHEET

Site name: J.H. Baxter-Arlington Region: NWRO

Street, city, county: 6520 188th ST. N.E. Arlington, Snohomish

Ecology TCP ID: N-31-0017-000

This site was ( )ranked, (X) re-ranked, on 06/08/98 based on quintile values from a total of 627 assessed/scored sites (from 07/10/97).

Pathway	Route Score(s)	Quintile Group number(s)
SW-HH	13.4 ✓	2
Air-HH	25.3 ✓	4
GW-HH	69.4 ✓	5
SW-En	34.3 ✓	3
Air-En	14.2 ✓	2

Priority scores:

$\frac{H^2 + 2M + L}{8}$: $25 + 8 + 2$ = $35/8 = 4.425$

$\frac{H^2 + 2L}{7}$: $9 + 4$ = $13/7 = 1.857 \rightarrow 2$

Use the matrix presented to the right, along with the two priority scores, to determine the site ranking. N/A refers to where there is no applicable pathway (e.g. typically with ground water route-only sites).

Human Health ↓ / Environment →	5	4	3	2	1	N/A
5	1	1	1	(1)	1	1
4	1	2	2	2	3	2
3	1	2	3	4	4	3
2	2	3	4	4	5	3
1	2	3	4	5	5	5
N/A	3	4	5	5	5	NFA

DRAFT / (FINAL)

Matrix ("bin") Ranking: 1, or _____ No Further Action

CONFIDENCE LEVEL: The relative position of this site within this bin is:

_____ almost into the next higher bin.
__X__ right in the middle, unlikely to ever change.
_____ almost into the next lower bin.

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WORKSHEET 1
SUMMARY SCORE SHEET

Site Name/Location (City, County, Section/Township/Range):
J.H. BAXTER AND COMPANY
Arlington, Snohomish

NW 1/4 of Section 22, T31N, R5E

Site Description (Include management areas, compounds of concern, and quantities):
Baxter uses pentachlorophenol (PCP) as a preservative for wood treating. Releases of the PCP solution has occurred in 1981, 1989, and 1990. Estimated volumes are 1400, 200 and 2000 gallons of pentachlorophenol, respectively. In 1990, PCP was detected in a well on the northwest corner of the property. Recent sampling indicates PCP in five of the seven wells on the site and in the soil near the retort and the yard for drying the treated logs. A trailer park is located on adjacent property to the northwest, and although potable water for the older, northerly part of the trailer park was supplied by a well, the park has abandoned the well and tied into the Arlington City water supply like the rest of the park.

Management areas....Contaminated soil and ground water.
Compounds of Concern....Pentachlorophenol, Benzene, Toluene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Chrysene, and Benzo(b)fluoranthene.
Quantities....3600 gallons of Pentachlorophenol and Aromatic Oils, Unknown for PAHs and Creosote.

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 is in an area that is a proposed "sole source " aquifer (Tulalip) by EPA's Office of Ground Water. The drinking water well at the trailer park adjacent to the site has been abandoned and the park has hooked up to Arlington City water. Other wells in the area are all up-gradient from the site.

Note: This site was re-scored and re-ranked June 8, 1998, at the request of Gail Colburn, Ecology Northwest Regional Office, based on the J.H. Baxter April 2, 1998 Dioxin/Furan Study Report documenting significant concentrations of dioxin and pentachlorophenol in storm water samples. The surface water route was scored for potential to release for both the human health and the environmental pathways. It was also found that a nearby public supply drinking water well user population had been inadvertently overlooked during the initial scoring/ranking of the site back in 1992.

ROUTE SCORES:

Surface Water/Human Health:	13.4	Surface Water/Environ.:	34.3
Air/Human Health:	25.3	Air/Environmental:	14.2
Groundwater/Human Health:	69.4		

OVERALL RANK: 1

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Creosote, PAHs and Aromatic Oils (Benzene and Toluene), Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Data and information provided by Baxter and their consultants. Field reconnaissance by Ecology personnel

List management units to be considered in scoring: Source: 1
Contaminated soil

Explain basis for choice of unit used in scoring. Source: 1
Data in documentation in the files. It was determined that there is no clear surface water pathway to score.

NOTE: The potential surface water human health and environmental migration pathways were scored during the re-rank of this site, based on an overland distance from the site to Portage Creek of 4000 - 5000 feet.

2. AIR ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Benzene, Toluene, Fluorene, Naphthalene, Creosote, Benzo(a)pyrene, Dibenzo(a,h)-anthracene, Benzo(a)anthracene, Chrysene, and Benzo(b)-fluoranthene. Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Data from documentation and data from sampling done by Ecology personnel.

List management units to be considered in scoring: Source: 1
Contaminated soil

Explain basis for choice of unit used in scoring.
Some air sampling was done from drill holes. Pentachlorophenol sample did not exceed detection level of <24 ug/m3 but clean-up level is 1.7 ug/m3. However, there were high levels of the PAHs in sampling done by Ecology personnel.

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Creosote, PAHs (Fluorene and Naphthalene) and Aromatic Oils (Benzene and Toluene), Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Historical records and data from consultants work for J.H. Baxter plus the Snohomish County Health Department and Ecology NWRO data.

List management units to be considered in scoring: Source: 1
Contaminated soil and ground water associated with monitoring wells.

Explain basis for choice of unit used in scoring.
Analysis of data provided by the property owner's consultant and the Snohomish County Health Department. PAHs and creosote not detected in ground water.

WORKSHEET 3
SUBSTANCE CHARACTERISTICS WORKSHEET
FOR MULTIPLE UNIT/SUBSTANCE SITES

	Combination 1	Combination 2	Combination 3
Unit:	**NOT APPLICABLE**		
Substance:			

SURFACE WATER ROUTE

Human Toxicity Value:

Environ. Toxicity Value:

Containment Value:

Surface Water Human Subscore:

Surface Water Environ. Subscore:

AIR ROUTE

Human Toxicity/Mobility Value:

Environ. Toxicity/ Mobility Value:

Containment Value:

Air Human Subscore:

Air Environ. Subscore:

GROUND WATER ROUTE

Human Toxicity/ Mobility Value:

Containment Value:

Ground Water Subscore:

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.	Carcinogenicity WOE	PF*	Val.
1. Pentachlorophenol (PCP)	0.1	10	ND	-	0.03	1	B2=.8	.12=5	4
2. Benzene	5	8	3306(rat)	3	ND	-	A=1	.029=5	5
3. Benzo(a)pyrene	0.2	10	50(rat)	10	ND	-	B2=.8	12=9	7
4. 2,3,7,8-TCDD (dioxin)	5E-05	10	ND	-	ND	-	B2=.8	150000=10	8
5. Toluene	2000	2	5000(rat)	3	0.2	1	ND		-
6. Fluorene	0.2	10	ND	-	0.04	1	ND		-
7. Napthalene	20	6	490(rat)	5	0.004	3	ND		-

*Potency Factor

Source: 1,2,5
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. PCP	20	6		
2. Benzene	5300	2		
3. Benzo(a)pyrene	ND	-	50	10
4. Dioxin	0.01	10		
5. Toluene	17500	2		
6. Fluorene	ND	-	ND	-
7. Napthalene	2300	2		

Source: 1,2,5 **Value: 10** (Max.=10)

1.3 Substance Quantity: 3600 gallons spilled Source: 1-3 **Value: 4** (Max.=10)
Explain basis: _____

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment — Source: 1-3 — **Value: 10** (Max.=10)
Explain basis: Score maximum value = 10 due to spill to ground, with no run-on/runoff control

2.2 Surface Soil Permeability: Reportedly high — Source: 1-3 — **Value: 1** (Max.=7)

2.3 Total Annual Precipitation: 34.7 inches — Source: 1 — **Value: 3** (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1.5 inches — Source: 3 — **Value: 2** (Max.=5)

2.5 Flood Plain: No — Source: 1 — **Value: 0** (Max.=2)

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

3.0 TARGETS

3.1 Distance to Surface Water: 4000 - 5000 feet — Source: 1-4 — **Value: 4** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): $\sqrt{pop.} = \sqrt{0} = 0$ — Source: 1,4 — **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles $0.75\sqrt{no.\ acres} = 0.75\sqrt{0} = (.75)(0) = 0$ — Source: 1,4 — **Value: 0** (Max.=30)

3.4 Distance to Nearest Fishery Resource: 4,000 feet — Source: 1-4 — **Value: 6** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Fishery - Portage Creek 4000 feet — Source: 1-4 — **Value: 6** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: — Source: 1-4 — **Value: 0** (Max.=5)
None documented

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.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcinogenicity WOE	PF*	Val.
1. Pentachlorophenol	1.7	9	---	ND	---	ND	--	--	ND
2. Benzene	0.12	10	---	ND	31947(rat)	3	A	0.11	5
3. Benzo(a) pyrene	0.0006	10	---	ND	---	ND	--	--	ND
4. Toluene	1249	1	ND	–	ND	–		ND	–
5. Fluorine	ND	–	ND	–	ND	–		ND	–
6. Dioxin	0.01	10	ND	–	ND	–	A		8
7. Naphthalene	~~3333~~ (166.5)	4	ND	–	ND	–		ND	–

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

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

1.3.1 Gaseous Mobility

Vapor Pressure(s): 1= 2 ; 2= 4 ; 3= 2 ; 4= 4 ; 5= 2 ; 6= 1 ; 7 > 3 Source: 3
Value: 4

1.3.2 Particulate Mobility

Soil type: _____ Source: _____
Erodibility: _____ Value: _____
Climatic Factor: _____

1.4 Final Human Health Toxicity/Mobility Matrix **Value:** 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Acute Toxicity	Value	Mobility	Value
1. Pentachlorophenol	ND	ND		ND
2. Benzene	31947 (rat)	3	4	6
3. Benzo(a)-pyrene	ND	ND		ND

Environmental Toxicity/Mobility Matrix Source: 2 **Value:** 6

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.6 Substance Quantity: 3600 gallon spills to ground, Source: 1 Value: 4
Explain basis: no containment

2.0 MIGRATION POTENTIAL

2.1 Containment: None - no vapor recovery system, Source: 3 Value: 10
Spill directly to ground surface.

3.0 TARGETS

3.1 Nearest Population: < 200 feet (Note- (<1000' = 10)) Source: 1 Value: 10

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Freshwater wetlands 3000 -4000 feet Source: 4 Value: 3

3.3 Population within 0.5 miles: ✓population=~~139~~ $\sqrt{220}$ Source: 4 Value: 15

4.0 RELEASE

Explain basis for scoring a release to air: Source: 1 Value: 0
No analytical documentation.

$\sqrt{(44)\ 880} = 220$

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcinogenicity WOE	PF*	Val.
1.Pentachlorophenol	0.1	10	~~0.0008~~ 0.03 (mjl)	1	---	ND	B2	0.12	4
2.Benzene	5	8	---	ND	3306(rat)	3	A	0.029	5
3.Toluene	2000	2	0.2	1	5000(rat)	3	-	--	ND
4.Fluorene	0.2	10	0.04	1	---	ND	-	--	ND
5.Naphthalene	20	6	0.004	3	490(rat)	5	-	--	ND
6. [redacted] Dioxin		10	ND	-	ND	-			8

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value 12

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions _____ Source: 3 Value: 3

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

1.3 Substance Quantity Source: 1 Value: ~~5~~ 4 (mjl)
Explain basis: A total of 3600 gallons spilled to the ground. Three separate incidents occurred in 1981, 1989, and 1990.

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 1 Value: 10
Explain basis: None - Spill to soil, overflow, therefore, no containment.

2.2 Net Precipitation: 25.6 inches Source: 1 Value: 3

2.3 Subsurface Hydraulic Conductivity: 2x10-3 to 3x10-3 Source: 1 Value: 3

2.4 Vertical Depth to Ground Water: ~~34~~ feet Source: 1 Value: ~~6~~ 8 (mjl)
(0' feet when doc. released)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: Private and public water supply, no other source since public wells draw from same aquifer. Source: 1 Value: 9

3.2 Distance to Nearest Drinking Water Well: < 750 ft Source: 1 Value: 4

3.3 Population Served within 2 Miles: ✓population=~~581~~ 4536 (MJ) Source: ~~1~~ Value: 67

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75✓no.acres=420 Source: 1 Value: 15

4.0 RELEASE

Explain basis for scoring a release to ground water: The release of pentachlorophenol has been reported by Baxter and their consultants Source: 1 Value: 5

SOURCES USED IN SCORING

1. WDOE, Site Hazard Assessment Data Collection Summary Sheets for the Washington Ranking Method. J.H. Baxter, Arlington. June 1992

2. SAIC, Toxicology Database for Use in the Warm Scoring. January 1992

3. SAIC and Parametrix. Washington Ranking Method Scoring Manual. Washington State Department of Ecology, Toxic Cleanup Program. Revised April 1992

4. U.S. Environmental Protection Agency GIS SITEINFO printout for site latitude/longitude.

5. Summary of results from J.H. Baxter April 2, 1998, Dioxin/Furan Study Report.

WORKSHEET 1
SUMMARY SCORE SHEET

Site Name/Location (City, County, Section/Township/Range):
J.H. BAXTER AND COMPANY
Arlington, Snohomish

NW 1/4 of Section 22, T31N, R5E

Site Description (Include management areas, compounds of concern, and quantities):
Baxter uses pentachlorophenol (PCP) as a preservative for wood treating. Releases of the PCP solution has occurred in 1981, 1989, and 1990. Estimated volumes are 1400, 200 and 2000 gallons of pentachlorophenol, respectively. In 1990, PCP was detected in a well on the northwest corner of the property. Recent sampling indicates PCP in five of the seven wells on the site and in the soil near the retort and the yard for drying the treated logs. A trailer park is located on adjacent property to the northwest, and although potable water for the older, northerly part of the trailer park was supplied by a well, the park has abandoned the well and tied into the Arlington City water supply like the rest of the park.

Management areas....Contaminated soil and ground water.
Compounds of Concern....Pentachlorophenol, Benzene, Toluene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene, Chrysene, and Benzo(b)fluoranthene.
Quantities....3600 gallons of Pentachlorophenol and Aromatic Oils, Unknown for PAHs and Creosote.

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 is in an area that is a proposed "sole source " aquifer (Tulalip) by EPA's Office of Ground Water. The drinking water well at the trailer park adjacent to the site has been abandoned and the park has hooked up to Arlington City water. Other wells in the area are all up-gradient from the site.

Note: This site was re-scored and re-ranked June 8, 1998, at the request of Gail Colburn, Ecology Northwest Regional Office, based on the J.H. Baxter April 2, 1998 Dioxin/Furan Study Report documenting significant concentrations of dioxin and pentachlorophenol in storm water samples. The surface water route was scored for potential to release for both the human health and the environmental pathways. It was also found that a nearby public supply drinking water well user population had been inadvertently overlooked during the initial scoring/ranking of the site back in 1992.

ROUTE SCORES:

Surface Water/Human Health:	13.4	Surface Water/Environ.:	34.3
Air/Human Health:	25.3	Air/Environmental:	14.2
Groundwater/Human Health:	69.4		

OVERALL RANK: 1

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Creosote, PAHs and Aromatic Oils (Benzene and Toluene), Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Data and information provided by Baxter and their consultants. Field reconnaissance by Ecology personnel

List management units to be considered in scoring: Source: 1
Contaminated soil

Explain basis for choice of unit used in scoring. Source: 1
Data in documentation in the files. It was determined that there is no clear surface water pathway to score.

NOTE: The potential surface water human health and environmental migration pathways were scored during the re-rank of this site, based on an overland distance from the site to Portage Creek of 4000 - 5000 feet.

2. AIR ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Benzene, Toluene, Fluorene, Naphthalene, Creosote, Benzo(a)pyrene, Dibenzo(a,h)-anthracene, Benzo(a)anthracene, Chrysene, and Benzo(b)-fluoranthene. Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Data from documentation and data from sampling done by Ecology personnel.

List management units to be considered in scoring: Source: 1
Contaminated soil

Explain basis for choice of unit used in scoring.
Some air sampling was done from drill holes. Penta-chlorophenol sample did not exceed detection level of <24 ug/m3 but clean-up level is 1.7 ug/m3. However, there were high levels of the PAHs in sampling done by Ecology personnel.

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List substances to be considered for scoring: Source: 1
Pentachlorophenol, Creosote, PAHs (Fluorene and Naphthalene) and Aromatic Oils (Benzene and Toluene), Dioxin.

Explain basis for choice of substance(s) to be used in scoring.
Historical records and data from consultants work for J.H. Baxter plus the Snohomish County Health Department and Ecology NWRO data.

List management units to be considered in scoring: Source: 1
Contaminated soil and ground water associated with monitoring wells.

Explain basis for choice of unit used in scoring.
Analysis of data provided by the property owner's consultant and the Snohomish County Health Department. PAHs and creosote not detected in ground water.

WORKSHEET 3
SUBSTANCE CHARACTERISTICS WORKSHEET
FOR MULTIPLE UNIT/SUBSTANCE SITES

	Combination 1	Combination 2	Combination 3
Unit:	**NOT APPLICABLE**		
Substance:			

SURFACE WATER ROUTE

Human Toxicity Value:

Environ. Toxicity Value:

Containment Value:

Surface Water Human Subscore:

Surface Water Environ. Subscore:

AIR ROUTE

Human Toxicity/Mobility Value:

Environ. Toxicity/ Mobility Value:

Containment Value:

Air Human Subscore:

Air Environ. Subscore:

GROUND WATER ROUTE

Human Toxicity/ Mobility Value:

Containment Value:

Ground Water Subscore:

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. Pentachloro-phenol (PCP)	0.1	10	ND	-	0.03	1	B2=.8	.12=5	4
2. Benzene	5	8	3306(rat)	3	ND	-	A=1	.029=5	5
3. Benzo(a)pyrene	0.2	10	50(rat)	10	ND	-	B2=.8	12=9	7
4. 2,3,7,8-TCDD (dioxin)	5E-05	10	ND	-	ND	-	B2=.8	150000=10	8
5. Toluene	2000	2	5000(rat)	3	0.2	1	ND		-
6. Fluorene	0.2	10	ND	-	0.04	1	ND		-
7. Napthalene	20	6	490(rat)	5	0.004	3	ND		-

*Potency Factor

Source: 1,2,5
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. PCP	20	6		
2. Benzene	5300	2		
3. Benzo(a)pyrene	ND	-	50	10
4. Dioxin	0.01	10		
5. Toluene	17500	2		
6. Fluorene	ND	-	ND	-
7. Napthalene	2300	2		

Source: 1,2,5 **Value: 10** (Max.=10)

1.3 Substance Quantity: 3600 gallons spilled Source: 1-3 **Value: 4** (Max.=10)
Explain basis: _____

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment — Source: 1-3 **Value:** 10 (Max.=10)
Explain basis: Score maximum value = 10 due to spill to ground, with no run-on/runoff control

2.2 Surface Soil Permeability: Reportedly high — Source: 1-3 **Value:** 1 (Max.=7)

2.3 Total Annual Precipitation: 34.7 inches — Source: 1 **Value:** 3 (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1.5 inches — Source: 3 **Value:** 2 (Max.=5)

2.5 Flood Plain: No — Source: 1 **Value:** 0 (Max.=2)

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

3.0 TARGETS

3.1 Distance to Surface Water: 4000 - 5000 feet — Source: 1-4 **Value:** 4 (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): $\sqrt{}$pop.=$\sqrt{}$0 = 0 — Source: 1,4 **Value:** 0 (Max.=75)

3.3 Area Irrigated within 2 miles 0.75$\sqrt{}$no. acres= 0.75$\sqrt{}$0 = (.75)(0) = 0 — Source: 1,4 **Value:** 0 (Max.=30)

3.4 Distance to Nearest Fishery Resource: 4,000 feet — Source: 1-4 **Value:** 6 (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Fishery - Portage Creek 4000 feet — Source: 1-4 **Value:** 6 (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: — Source: 1-4 **Value:** 0 (Max.=5)
None documented

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.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcinogenicity WOE	PF*	Val.
1. Pentachlorophenol	1.7	9	---	ND	---	ND	--	--	ND
2. Benzene	0.12	10	---	ND	31947(rat)	3	A	0.11	5
3. Benzo(a) pyrene	0.0006	10	---	ND	---	ND	--	--	ND
4. Toluene	1249	1	ND	-	ND	-		ND	-
5. Fluorine	ND	-	ND	-	ND	-		ND	-
6. Dioxin	0.01	10	ND	-	ND	-	A		8
7. Naphthalene	~~332.5~~ (166.5)	4	ND	-	ND	-		ND	-

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

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

1.3.1 Gaseous Mobility

Vapor Pressure(s): 1= 2 ; 2= 4 ; 3= 2 ; 4= 4 ; 5= 2 ; 6= 1 ; 7 > 3 **Source:** 3
Value: 4

1.3.2 Particulate Mobility

Soil type: _____ **Source:** _____
Erodibility: _____ **Value:** _____
Climatic Factor: _____

1.4 Final Human Health Toxicity/Mobility Matrix **Value:** 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Acute Toxicity	Value	Mobility	Value
1. Pentachlorophenol	ND	ND		ND
2. Benzene	31947 (rat)	3	4	6
3. Benzo(a)-pyrene	ND	ND		ND

Environmental Toxicity/Mobility Matrix **Source:** 2 **Value:** 6

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.6 Substance Quantity: 3600 gallon spills to ground, Source: 1 Value: 4
Explain basis: no containment

2.0 MIGRATION POTENTIAL

2.1 Containment: None - no vapor recovery system, Source: 3 Value: 10
Spill directly to ground surface.

3.0 TARGETS

3.1 Nearest Population: < 200 feet (Note - <1000' = 10) Source: 1 Value: 10

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Freshwater wetlands 3000 -4000 feet Source: 4 Value: 3

3.3 Population within 0.5 miles: ✓population=~~139~~ √220 (MW) Source: 4 Value: 15

4.0 RELEASE

Explain basis for scoring a release to air: Source: 1 Value: 0
No analytical documentation.

$\sqrt{(44)\ 880} = 220$

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcinogenicity WOE	PF*	Val.
1. Pentachlorophenol	0.1	10	~~0.0008~~ 0.03 (mjh)	1	---	ND	B2	0.12	4
2. Benzene	5	8	---	ND	3306(rat)	3	A	0.029	5
3. Toluene	2000	2	0.2	1	5000(rat)	3	-	--	ND
4. Fluorene	0.2	10	0.04	1	---	ND	-	--	ND
5. Naphthalene	20	6	0.004	3	490(rat)	5	-	--	ND
6. [redacted] Dioxin		10	ND	-	ND	-			8

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value 12

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

Cations/Anions _____ Source: 3 Value: 3

OR

Solubility(mg/l) 1.= 1, 2.= 3, 3.= 2, 4.= 3, 5.= 1, and 6.= .

1.3 Substance Quantity

Source: 1 Value: ~~5~~ 4 (mjh)

Explain basis: A total of 3600 gallons spilled to the ground. Three separate incidents occurred in 1981, 1989, and 1990.

2.0 MIGRATION POTENTIAL

2.1 Containment

Source: 1 Value: 10

Explain basis: None - Spill to soil, overflow, therefore, no containment.

2.2 Net Precipitation: 25.6 inches

Source: 1 Value: 3

2.3 Subsurface Hydraulic Conductivity: 2x10-3 to 3x10-3

Source: 1 Value: 3

2.4 Vertical Depth to Ground Water: ~~34~~ feet

Source: 1 Value: ~~6~~ 8 (mjh)

(0' feet when doc. release)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: Private and public water supply, no other source since public wells draw from same aquifer. Source: 1 Value: 9

3.2 Distance to Nearest Drinking Water Well: < 750 ft Source: 1 Value: 4

3.3 Population Served within 2 Miles: ✓population=~~581~~ 4536 (MJB) Source: 1 Value: 67

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75✓no.acres=420 Source: 1 Value: 15

4.0 RELEASE

Explain basis for scoring a release to ground water: The release of pentachlorophenol has been reported by Baxter and their consultants

Source: 1 Value: 5

SOURCES USED IN SCORING

1. WDOE, Site Hazard Assessment Data Collection Summary Sheets for the Washington Ranking Method. J.H. Baxter, Arlington. June 1992

2. SAIC, Toxicology Database for Use in the Warm Scoring. January 1992

3. SAIC and Parametrix. Washington Ranking Method Scoring Manual. Washington State Department of Ecology, Toxic Cleanup Program. Revised April 1992

4. U.S. Environmental Protection Agency GIS SITEINFO printout for site latitude/longitude.

5. Summary of results from J.H. Baxter April 2, 1998, Dioxin/Furan Study Report.