WASHINGTON RANKING METHOD

ROUTE SCORES SUMMARY AND RANKING CALCULATION SHEET

For Sites With No Sediment Route Migration Pathways

Site name: J.H. Baxter and Company, Arlington Region: NWRO

Street, city, county: Arlington, Snohomish

This site was (X) ranked, ( ) re-ranked on August, 25 1992, based on quintile values from ____ assessed/scored sites.

Pathway	Route Score(s)	Quintile Group number(s)
SW-HH	N.A.	0
Air-HH	22.2	4
GW-HH	52.2	4
SW-En	N.A.	0
Air-En	0.0	0

Priority scores:

$$\frac{H^2 + 2M + L}{8} = \frac{16+8+0}{8} = 3.0$$

$$\frac{H^2 + 2L}{7} = \frac{0.0}{7} = 0.0 = N/A$$

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.

Human Health	Environment 5	4	3	2	1	N/A
5	1	1	1	1	1	1
4	1	2	2	2	3	4
3	1	2	3	4	4	5
2	2	3	4	4	5	5
1	2	3	4	5	5	5
N/A	3	4	5	5	5	NFA

DRAFT / FINAL

Matrix ("bin") Ranking: 5, 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.

rev. 7/92

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.

ROUTE SCORES:

Surface Water/Human Health:	N.A.	Surface Water/Environ.:	N.A.
Air/Human Health:	22.2	Air/Environmental:	0.0
Ground Water/Human Health:	52.2		

OVERALL RANK: 5

Rev. 5/31/91

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).

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.

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.

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).

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 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:

J.H. BAXTER, ARLINGTON
SITE HAZARD ASSESSMENT

J.H. Baxter (Baxter) is a woodtreating facility in Arlington, Washington. The site is located southeast of the intersection of 67th Avenue and 188th Street, approximately two miles east of the I-5 freeway in Snohomish County (Township 31N., Range 5E., Section 22). (See Figure 1.) The site is nearly flat and low hills are present to the east. Portage Creek is approximately one mile northeast and the Stillaguamish River approximately two and one-half miles north.

The soil stratigraphy at the site typically consists of 20 to 25 feet of sand and gravel underlain by slightly silty to silty sands to at least 50 feet below the ground surface. The silty sands belong to the Marysville sand member and are believed to be at least 150 feet thick in the area. The Marysville sand is believed to lie on till, which acts as a confining layer for a deeper aquifer.

Groundwater exists in an unconfined condition throughout most of the site with the upper groundwater table present in the silty sands. The upper aquifer groundwater flows from the southeast to the northwest at the site; measured gradients range from about 0.007 to 0.03 foot per foot. The unconfined water table aquifer is a drinking water source.

Surrounding land use includes the Arlington Municipal Airport to the west, residences (including a trailer park to the northwest) less than 500 feet from the site, other light industrial businesses, farming and a municipal park.

SITE HISTORY

Baxter began wood treating operations at the site in 1970. Prior to 1970, 17 acres in the northeast part of the site contained a pole peeling and wood treating facility owned and operated by Ted Butcher, Inc. and similar to J.H. Baxter's. Baxter purchased that site and an additional undeveloped 28-acre parcel to the south. A third 7-acre parcel was purchased in 1978. This parcel was previously used as a gravel pit and was then used by Baxter as a woodwaste landfill.

Treatment equipment, on site, consists of a butt tank, thermal retorts and a contained tank farm. Untreated logs are stored on the southern portions of the site and treated logs are stockpiled north of the retort. (See Figure 2.)

Pentachlorophenol and creosote have been used as wood preservatives at the site, but Baxter discontinued creosote treating in 1990. Releases, in the form of spills, of the

pentachlorophenol solution from the butt tank were reported in March 1981, February 1989, and January 1990. Estimated volumes of the pentachlorophenol solution released were 1400, 200, and 2000 gallons respectively. During the 1990 event, the pentachlorophenol solution flowed across the ground surface toward the northwest, where it ponded in a small depression, and toward the south where it was contained in a holding area by personnel on the site.

In May, 1990, pentachlorophenol at a concentration of 150 ug/l was detected in a well completed in the upper unconfined aquifer in the northwest corner of the property. Further testing of seven monitoring wells detected contamination in six of the wells that ranged from 0.005 to 0.44 ug/l and indicated the presence of a plume of pentachlorophenol extending to the north-northwest.

A trailer park is located on an adjacent property to the northwest. Potable water for a portion of the trailer park is supplied by a single well. The well is screened in the upper aquifer. Pentachlorophenol has not been detected in the well water collected and analyzed by the Snohomish County Health Department, but the proximity and direction of the "penta" plume indicates there could be a problem in the future. Baxter extended an offer to the owner to pay for the cost of hooking up the trailer park to city water. The trailer park owner has not accepted the offer. The site was ranked on the understanding that the hookup was going to occur. If the site was ranked on the premise at groundwater usage for a public water supply and on the proximity of the trailer park well, the ranking would probably have been a "2" rather than a "4".

SAMPLING DATA AND INFORMATION

Ground water sampling for J.H. Baxter was conducted by Woodward-Clyde Consultants. The presence of Pentachlorophenol in the upper aquifer is mentioned previously in this report. Sampling was done in August and October, 1991. Monitoring well locations are indicated in Figure 2. Results of the sampling are shown in Table 1. This data was used in scoring the ground water pathway for the WARM Ranking.

The Department of Ecology could not find a surface water route to sample. The soil on the site is primarily sand and liquids do not run off the site but readily sink into the ground. There are "storm drains" on the site but these discharge directly to the ground, and therefore are considered part of the groundwater rather than the surface water. system to a treatment facility. We therefore felt that the Surface Water route could not be scored for the WARM Ranking.

The Department of Ecology conducted soil sampling, March 25, 1992. Sampling was done by Elaine Atkinson and Judith Aitken. Four samples and duplicates were taken. Figure 3 shows the locations of the samples. Locations were as follows:

Sample 40 (J.H. Baxter, #3-25-1JHB) The sample was taken at the south end of the old drip pad and retort where the logs now enter the retort. It is adjacent to the end of the pad and to the left of the railroad tracks.

Sample 41 (J.H. Baxter, #3-25-2JHB) The sample is at the north end of the new drip pad, actually eight (8) feet from the end of the pad, about half way between the pad and the "storm" drain.

Sample 42 (J.H. Baxter, #3-25-3JHB) This sample was taken at the south end of the treated log storage area, directly north of the housing near the butt tank in the area where the treated wood had been stacked and thirty (30) feet from the railroad spur.

Sample 43 (J.H. Baxter, #3-25-4JHB) This sample was taken at the north end of the treated wood area, in the silty soil beneath a pile of treated telephone poles. The poles in the pile were both butt-treated and treated in the retort.

This information was considered when scoring the Air route for the WARM ranking.

RESULTS

The soil sampling indicated the presence of Pentachlorophenol, Benzo(a)pyrene, Di-Benzo(a,h)anthracene, Benzo(a)anthracene, Chrysene, Carbazole, Pyrene, Fluoranthene and Benzo(b)fluoranthene in excess of MTCA Level B Cleanup Levels.(See Table 2) The sites that were closest to the retort were contaminated at higher levels. Almost all of the analytes were positively identified but the numerical values are estimates.

The presence of Pentachlorophenol, Benzene, and Benzo(a)pyrene in the confirmed spills allows the air pathway to be scored. Three thousand six- hundred gallons of preservative were spilled. The Ambient Air Standards for Pentachlorophenol is 1.7 ug/m3. All surface soil samples indicated "penta" in excess of 6000 ug/kg.

The site ranked "4" on the Site Hazard Assessment Ranking. The driving force for the ranking is the location of the drinking water wells. As stated before, the drinking water well at the trailer park (northwest of the site) was supposed to be abandoned and the trailers hooked up to the City of Arlington drinking water. The hookup is being

negotiated between J.H. Baxter and the trailer park owners but is presently at an impasse (as of 12-17-92). If accord is not reached, the site will have to be reranked and will fall in a much higher quintile because of the trailer park's proximity.

Bibliography

Snohomish Health District. Analysis of Airway Home Park Well for Pentachlorophenol (PCP). March 12, 1992.

Woodward-Clyde Consultants. Final Report - Soil and Groundwater Investigations, J.H. Baxter, Arlington, Wa. Wood Treating Facility. December, 1990.
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Woodward-Clyde Consultants. Phase II Groundwater Investigation Work Plan. June, 1991.

Department of Ecology, Manchester Laboratories. Sampling Results, J.H. Baxter, Arlington. June, 1992.

Department of Ecology. Fall 1992 update to Cleanup Standards Database. November, 1992.

Department of Ecology. Summary Score Sheets - WARM. August, 1992.

February 1989, and January 1990. Estimated volumes of the pentachlorophenol solution released were 1400, 200, and 2000 gallons respectively. During the 1990 event, the pentachlorophenol solution flowed across the ground surface toward the northwest, where it ponded in a small depression, and toward the south where it was contained in a holding area by personnel on the site.

In May, 1990, pentachlorophenol at a concentration of 150 ug/l was detected in a well completed in the upper unconfined aquifer in the northwest corner of the property. Further testing of seven monitoring wells detected contamination in six of the wells that ranged from 0.005 to 0.44 ug/l and indicated the presence of a plume of pentachlorophenol extending to the north-northwest.

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SAMPLING DATA AND INFORMATION

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The Department of Ecology could not find a surface water route to sample. The soil on the site is primarily sand and liquids do not run off the site but readily sink into the ground. There are "storm drains" on the site but they do not lead anywhere and do not act as a collection system to a treatment facility. We therefore felt that the Surface Water route could not be scored for the WARM Ranking.

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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):
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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.

ROUTE SCORES:

Surface Water/Human Health:	N.A.	Surface Water/Environ.:	N.A.
Air/Human Health:	22.2	Air/Environmental:	0.0
Ground Water/Human Health:	52.2		

OVERALL RANK: 4

Rev. 5/31/91

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).

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.

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.

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).

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 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 — NOT SCORED, NOT APPLICABLE

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcino-genicity WOE	PF*	Val.

There is no surface water pathway. The water that occurs or falls on the surface does not go off-site due to extreme soil porosity, and there are no targets or receptors.

*Potency Factor

Source:_____
Highest Value:_____
+2 Bonus Points?_____
Final Toxicity Value_____

1.2 Environmental Toxicity

Substance	Acute Criteria (ug/l)	Non-human Mammalian Acute Toxicity (mg/kg)	Value
1.			
2.			
3.			
4.			
5.			
6.			

Source:_____ Value:_____

1.3 Substance Quantity

Source:_____ Value:_____

Explain basis:_____

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment — Source:_____ Value:_____
Explain basis:_____

2.2 Surface Soil Permeability:_____ Source:_____ Value:_____

2.3 Total Annual Precipitation:_____ inches Source:_____ Value:_____

2.4 Max. 2-Yr/24-hour Precipitation:_____ inches Source:_____ Value:_____

2.5 Flood Plain:_____ Source:_____ Value:_____

2.6 Terrain Slope:_____ % Source:_____ Value:_____

3.0 TARGETS

3.1 Distance to Surface Water:_____ Source:_____ Value:_____

3.2 Population Served within 2 miles: ✓pop.=_____ Source:_____ Value:_____

3.3 Area Irrigated within 2 miles: 0.75✓no. acres=_____ Source:_____ Value:_____

3.4 Distance to Nearest Fishery Resource:_____ Source:_____ Value:_____

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s)_____ Source:_____ Value:_____

4.0 RELEASE
Explain basis for scoring a release to surface water:_____ Source:_____ Value:_____

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.									
5.									
6.									

*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 Source: 3
4= ; 5= ; 6= **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 Source: 1 Value: 10

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Source: 1 Value: 0

3.3 Population within 0.5 miles: ✓population=139 Source: 1 Value: 12

4.0 RELEASE

Explain basis for scoring a release to air: Source: 1 Value: 0

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	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

*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
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

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 Source: 1 Value: 24

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

TABLE 2

SOIL CONTAMINANTS

(ug/kg in soil) Method B

	MTCA Std. (B)	Sample 40	Dup.	Sample 41	Sample 42	Dup.	Sample 43	Dup.
Benzo(a)pyrene	172.0	**2300J***	**3000J***	390 U	**570J***	180000 U	450 UJ	8900 UJ
Dibenzo(a,h)anthracene	172.0	**1200J***	**710J***	390 U	**160J***	460000 UJ	1100 UJ	23000 UJ
Benzo(a)anthracene	172.0	**2600***	7100 U	390 U	**2600J***	180000 U	450 U	8900 U
Acenaphthene	4.8E+03	46J	7100 U	390 U	900 U	180000 U	450 U	8900 U
Fluorene	3.2E+03	110J	130J*	390 U	900 U	180000 U	450 U	8900 U
Carbazole	5.0E+01	2400J*	**1100J***	2000 UJ	4600 UJ	930000 UJ	2300 UJ	46000 UJ
Pentachlorophenol	833	**06400J***	**64000J***	**6000J***	**1.9 x 10^6J***	**1.4 x 10^6J***	**31000***	**31000 J***
Anthracene	2.4E+04	870*	540J*	375*	900 U	180000 U	450J	8900 UJ
Pyrene	2.4E+03	**7600J***	**6700J***	260J*	**13000J***	180000 U	770J*	8900 UJ
Fluoranthene	3.2E+03	**9200***	**6500J***	160J*	**5700J***	180000 U	310J*	8900 UJ
Chrysene	172.0	**2600***	**5100J***	**170J***	**2400J***	180000 U	**390J**	8900 UJ
Benzo(b)fluoranthene	172.0	**8200J***	**7800***	**180J***	**1200J***	180000 U	**310J**	8900 UJ

J = The analyte was positively identified, the associated numerical value is an estimate.
* = The analyte was present in the sample.
UJ = The analyte was not detected at or above the reported estimated result.
U = The analyte was not detected at or above the reported value.

Those samples containing contaminants greater than MTCA cleanup standards are in **bold** and underlined.

Method B Formula values as of Fall 1992.

J.H. BAXTER, ARLINGTON, WASHINGTON

Table 1. Monitoring Results – GROUND WATER

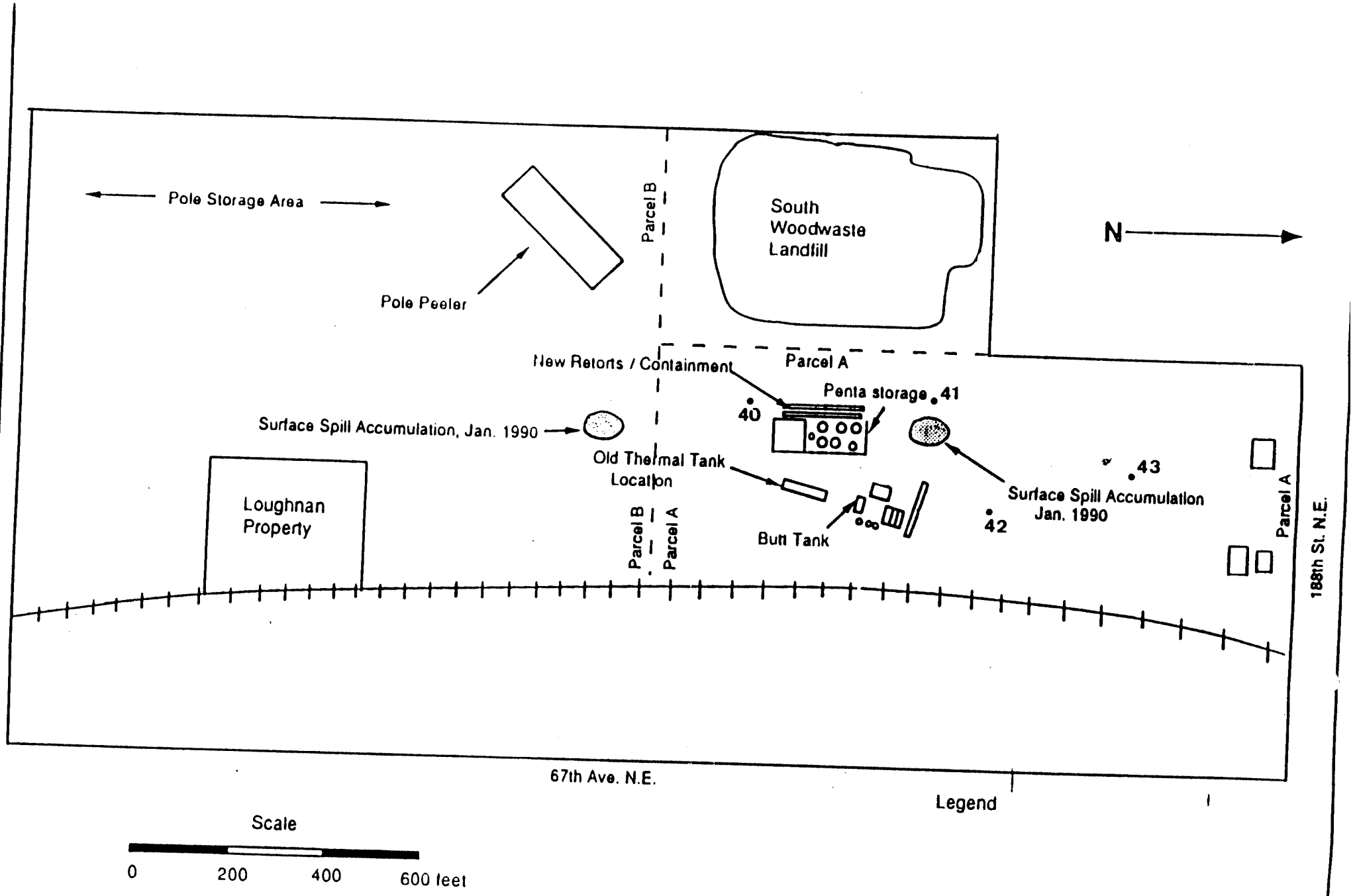
	August 1991					October 1991				
Well ID	Pentachloro-phenol, mg/L	pH	Tempera-ture, C	Specific Conductivity, S/cm [2]	Water Level Elevation, ft	Pentachloro-phenol, mg/L	pH	Tempera-ture, C	Specific Conductivity, S/cm	Water Level Elevation, ft
MW-1	<0.0002	6.32	11.0	61	72.9	NS	NS	NS	NS	NS
MW-2	NS	NS	NS	NS	NS	0.0083	6.22	10.7	170	60.5
MW-3	0.44	6.14	11.9	75	63.1	0.21 0.44[1]	6.27 5.95	9.8 10.0	120 135	60.7
BXS-1	0.052 0.047 (dup)	6.03	12.8	290	62.4	NS	NS	NS	NS	NS
BXS-2	0.0006	6.23	15.6	550	63.7	NS	NS	NS	NS	NS
BXS-3	<0.0002 0.034 (dup)	6.37	17.9	460	66.1	0.0005	NS	NS	640	63.8
BXS-4	0.0013	7.79	12.9	140	82.8	NS	NS	NS	NS	NS

[1] sample collected after 4600 gallon purge

[2] microsiemens per centimeter

NS denotes not sampled

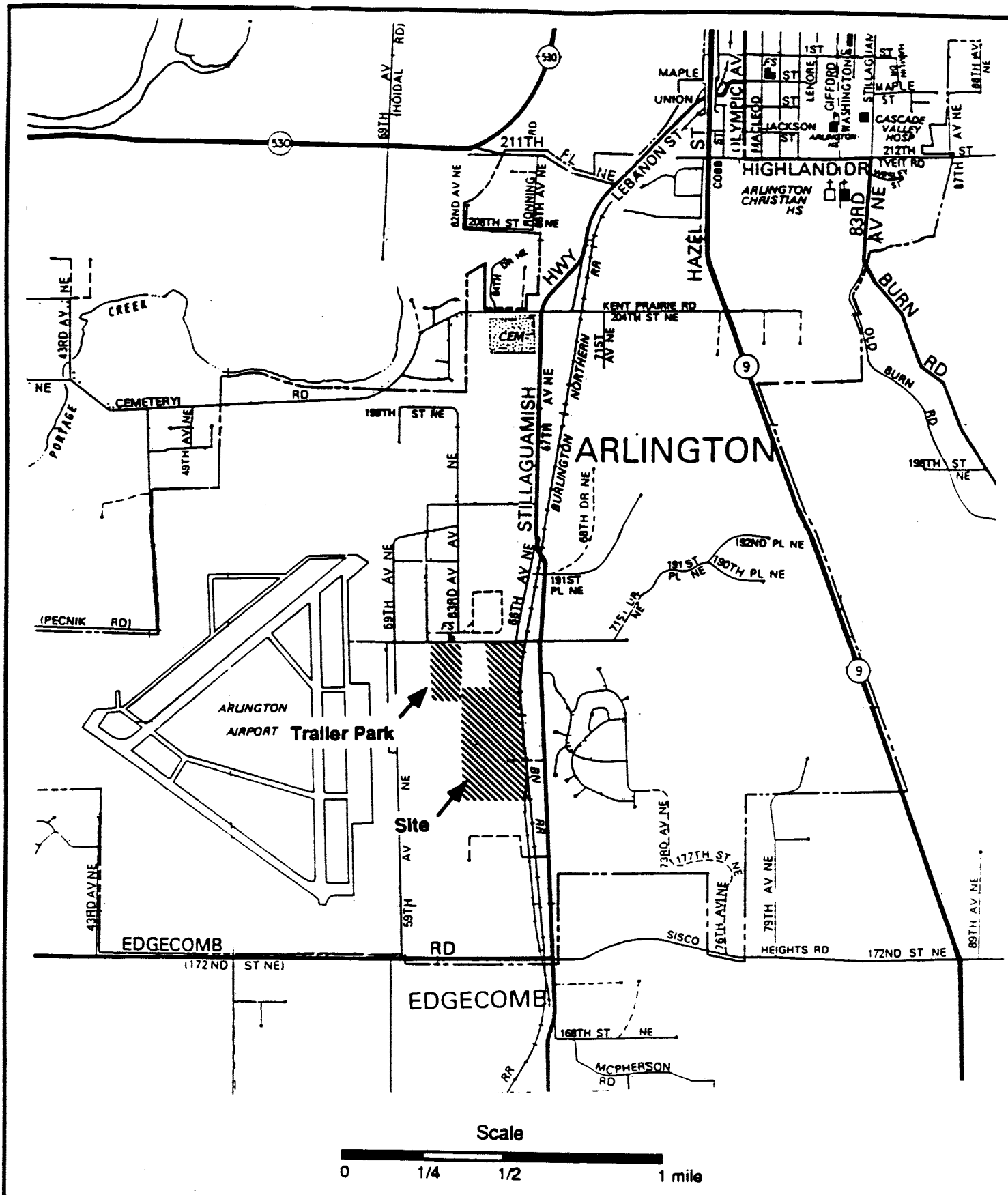
TAKEN FROM WOODWARD–CLYDE CONSULTANTS. DECEMBER 1990



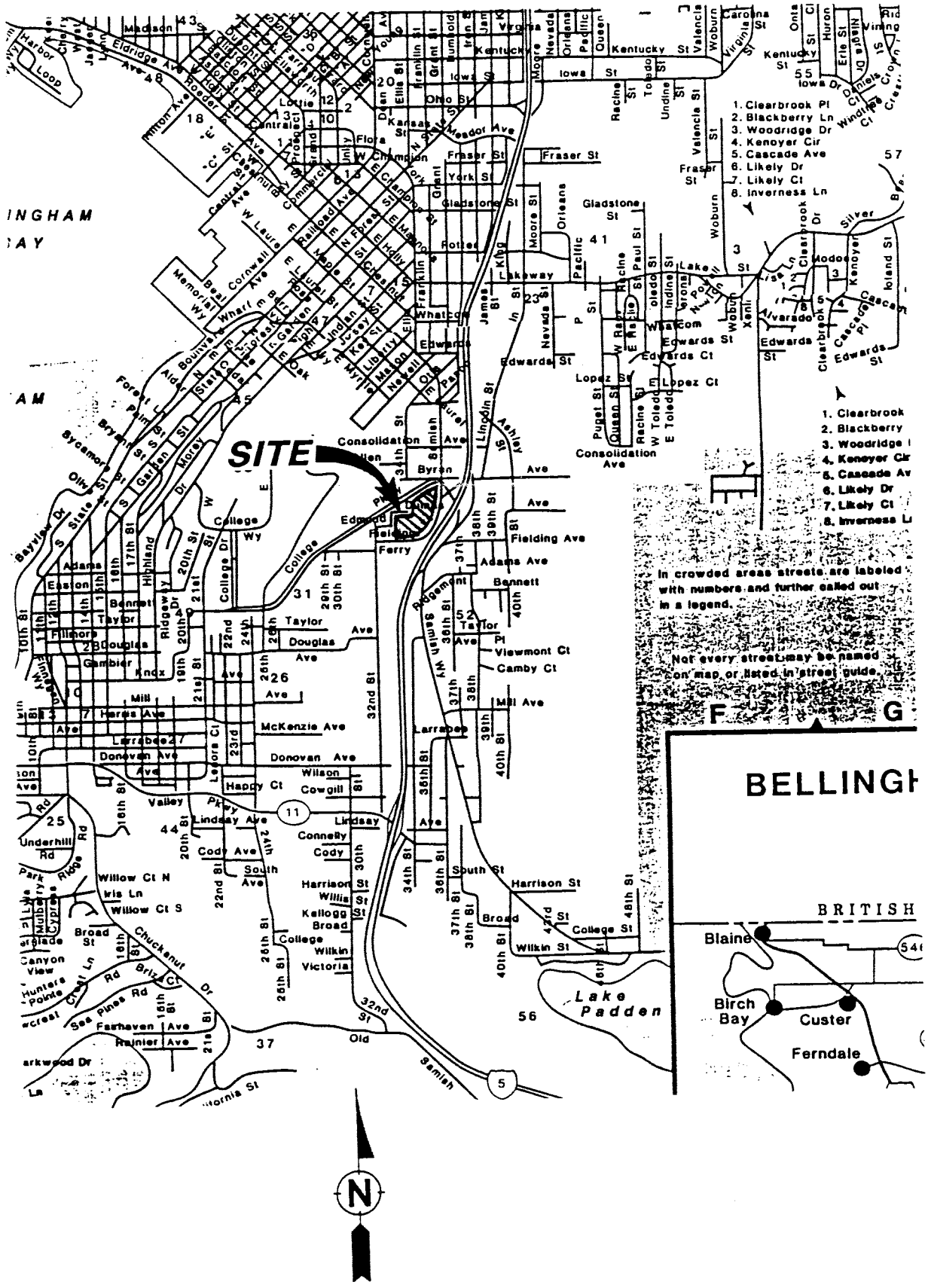
J H BAXTER, ARLINGTON

SOIL SAMPLING SITES

Figure 3



Project No. 90C0456A	J.H. Baxter and Co. Arlington WA Facility	Vicinity Map	Figure 1
Woodward-Clyde Consultants			



RZA-AGRA	W.O. W-6366-1
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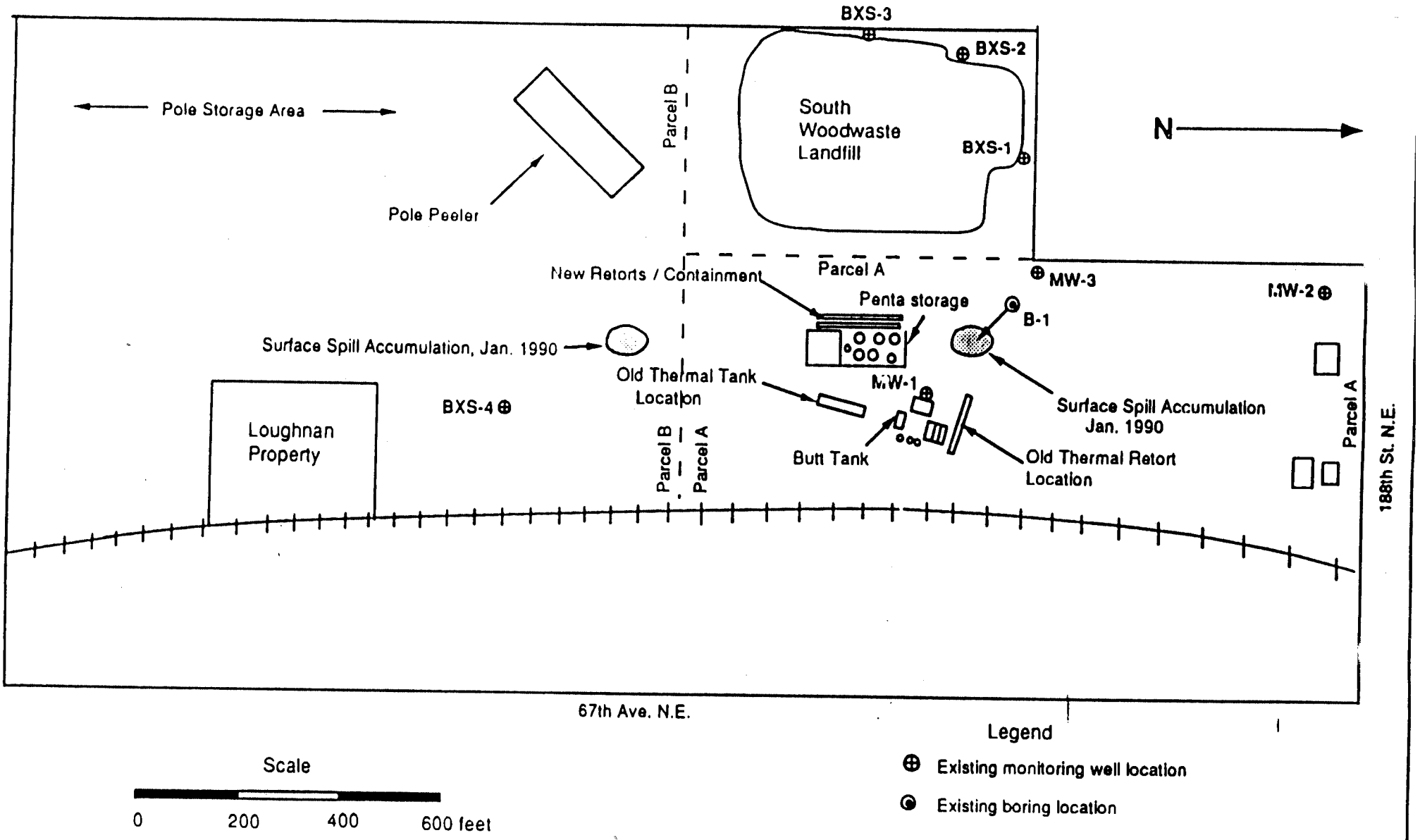
Suite 100	DATE AUG 1992
Kirkland, Washington	SCALE N.T.S.
98034-6918	

BELLINGHAM MALL
BELLINGHAM, WASHINGTON

LOCATION MAP

FIGURE 1



Project No. 90C0456A	J.H. Baxter and Co. Arlington, WA Facility	Facility Map	Figure 2
Woodward-Clyde Consultants		GROUNDWATER MONITERING WELLS	

Table 1
Results of Groundwater Analyses
(in parts per million, ppm)
Sampling Events

Contaminant	16 Oct	25 Oct	13 Nov	EPA Drinking Water MCL
		MW-2		
Trichloroethylene	1.05	0.830	3.80	0.005
Tetrachloroethylene	0.418	.196	.994	0.005
1, 2, transdichloroethylene	3.41	20.08	26.73	0.007
		MW-3		
Trichloroethylene		0.027	0.007	0.005
Tetrachloroethylene		<0.001	0.002	0.005
1, 2, transdichloroethylene		<0.001	<0.001	0.007