

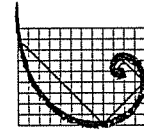
August 3, 1994

COPY

2821 Northup Way
Suite 100
Bellevue, WA 98004-1439
(206) 827-9574
(206) 827-2408 (Fax)

Mr. Martin Barron
Wells & Wade Fruit Company
P.O. Box 259
Wenatchee, Washington 98807

REPORT: Groundwater Extraction Pilot Test Services at the
Birchmount Orchards Company, Wenatchee,
Washington



ERM
EnviroClean

Dear Mr. Barron:

ERM-EnviroClean Northwest, Inc. (EC-NW) is pleased to present this letter report of environmental assessment studies at the Birchmount Orchards facility in Wenatchee, Washington. The Birchmount Orchards facility is located at 3717 Crestview Road, approximately one mile north of Highway 97. The site and surrounding area are included in *Figure 1 - Site Vicinity Map*. Site features are shown in *Figure 2 - Site Plan Map*.

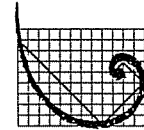
EC-NW completed two phases of site characterization studies between March and May, 1994. The results of these studies are summarized in the *Interim Supplemental Site Characterization/Cleanup Report* dated July, 1994. Gasoline-range petroleum hydrocarbon (TPH-G) concentrations greater than the Model Toxics Control Act (MTCA) Method A cleanup levels were detected in groundwater samples obtained from a boring (B-4) near the location of the former USTs and monitoring well MW-3, south of the former UST locations.

SCOPE OF SERVICES

EC-NW developed a groundwater extraction pilot test to evaluate the feasibility of alternatives for groundwater remediation at the site. Information gathered during the pilot test will be used to assist in the remedial alternative selection, specific design and cost estimates for groundwater remediation at the site. The generalized scope of services for this study is as follows:

1. Complete a 4-hour aquifer test at monitoring well MW-3 to help determine an optimum pumping rate for a 30-day pilot aquifer test.

2. Complete a one month aquifer pilot test at monitoring well MW-3.
3. Collect three groundwater samples from monitoring well MW-3, and one groundwater sample from monitoring wells MW-1 and MW-2 and analyze for one or more of the following: TPH-G by Ecology Method WTPH-G; and benzene, ethylbenzene, toluene, and total xylenes (BETX) by EPA Method 8020.
4. Collect one water sample from the holding tank containing recovered groundwater and analyze for TPH-G by Ecology Method WTPH-G.
5. Treat recovered groundwater, if necessary, and dispose the water by land application at the site.
6. Evaluate aquifer characteristics and provide a summary of data and observations.



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AQUIFER TESTING

The 4-hour aquifer test was completed on June 17, 1994. A variable-rate test was not completed because of the relatively low volume of water production observed in monitoring well MW-3 during the early stages of the test. A pumping rate of approximately 0.5 gallons per minute (gpm) was determined to maintain adequate water production for the one month aquifer test. The pump discharge was set at approximately 0.46 gpm on June 17, 1994 to begin the one month aquifer test. The test was concluded on July 15, 1994, with pump discharges measured during this period varying between 0.34 gpm and 0.46 gpm.

Water levels were measured periodically in all monitoring wells at the site during the 4-hour and the one month aquifer tests. Groundwater elevation contours interpolated from ground water measurements obtained during the one month aquifer test are included in *Figure 3*.

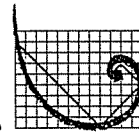
GROUNDWATER SAMPLING

Ground water samples collected from monitoring well MW-3 (*Figure 2*) indicate increasing TPH-G concentrations during the one month pump test. Approximately one inch of free (floating) product was

observed on the water table in well MW-3 on July 15, 1994. TPH-G and BETX were not detected in ground water samples collected from monitoring wells MW-1 and MW-2 on July 15, 1994.

Groundwater was not present in downgradient monitoring wells MW-4 and MW-5 during this study even though the well screens at these locations extend at least 10 feet below the static water level measured in monitoring well MW-3.

Chemical analytical data for groundwater samples obtained from the monitoring wells are summarized in Table 1. Laboratory reports, quality assurance/quality control (QA/QC) data, and chain-of-custody documentation for these samples are included in Attachment A. The sampling protocols and procedures followed appropriate state and federal guidance documents, primarily EPA SW-846 and Washington State MTCA and LUST recommendations.



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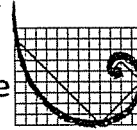
WATER DISPOSITION

Approximately 9,000 gallons of groundwater extracted during the aquifer test were stored in a 21,000-gallon steel tank on site. The water in the tank was sampled on July 1, 1994 for TPH-G. The concentration of TPH-G in the water was less than the MTCA Method A groundwater cleanup level. WDOE Central Region office in Yakima, Washington was contacted on July 18, 1994 regarding land application of the water. The requirements outlined by the WDOE for land application of the water were (1) concentrations of petroleum hydrocarbons in the water must be less than MTCA Method A cleanup levels and (2) a letter including chemical analytical data must be submitted to the WDOE after the land application is completed. The water was land applied on July 20, 1994 by opening a valve on the tank and allowing the water to flow onto a grassy area and infiltrate into the soil.

Chemical analytical results for the water are included in Table 1. Laboratory reports, quality assurance/quality control (QA/QC) data, and chain-of-custody documentation for these samples are included in Attachment A. The letter submitted to the WDOE reporting the land application is included in Attachment B.

CONCLUSIONS AND RECOMMENDATIONS

Based on our observations of conditions during aquifer testing at the site, it is our opinion that effective groundwater remediation can be achieved by groundwater extraction and treatment with an air stripping system. Aquifer test measurements indicate that a system can be installed that can continuously extract and treat approximately 3 gpm of groundwater. Figure 4 illustrates a schematic design for a system layout. Final system selection, design and construction will be completed in concert with the client.



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Final remedial system design elements should include free product recovery, low water level system shut-off and cold-weather operation capabilities.


LIMITATIONS

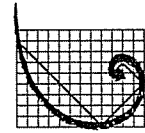
This report is based upon applications of scientific principles and professional judgement to certain facts with resultant subjective interpretations. Professional judgements expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget and schedule. To the extent that more definitive conclusions are desired by the client than are warranted by the currently available facts, it is specifically ERM-EC's intent that the conclusions and recommendations stated in our report will be intended as guidance and not necessarily a firm course of action except where explicitly stated as such. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In addition, the information provided in this report is not to be construed as legal advice.

We appreciate the opportunity to provide these services to you. If you have any questions regarding this report, please call me at (206) 827-9574.

Sincerely,

ERM-ENVIROCLEAN NORTHWEST, INC.


Gary L. Galloway
President



ERM
EnviroClean

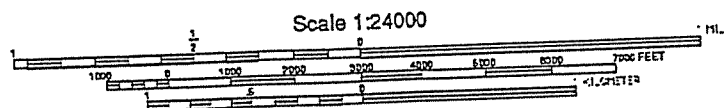
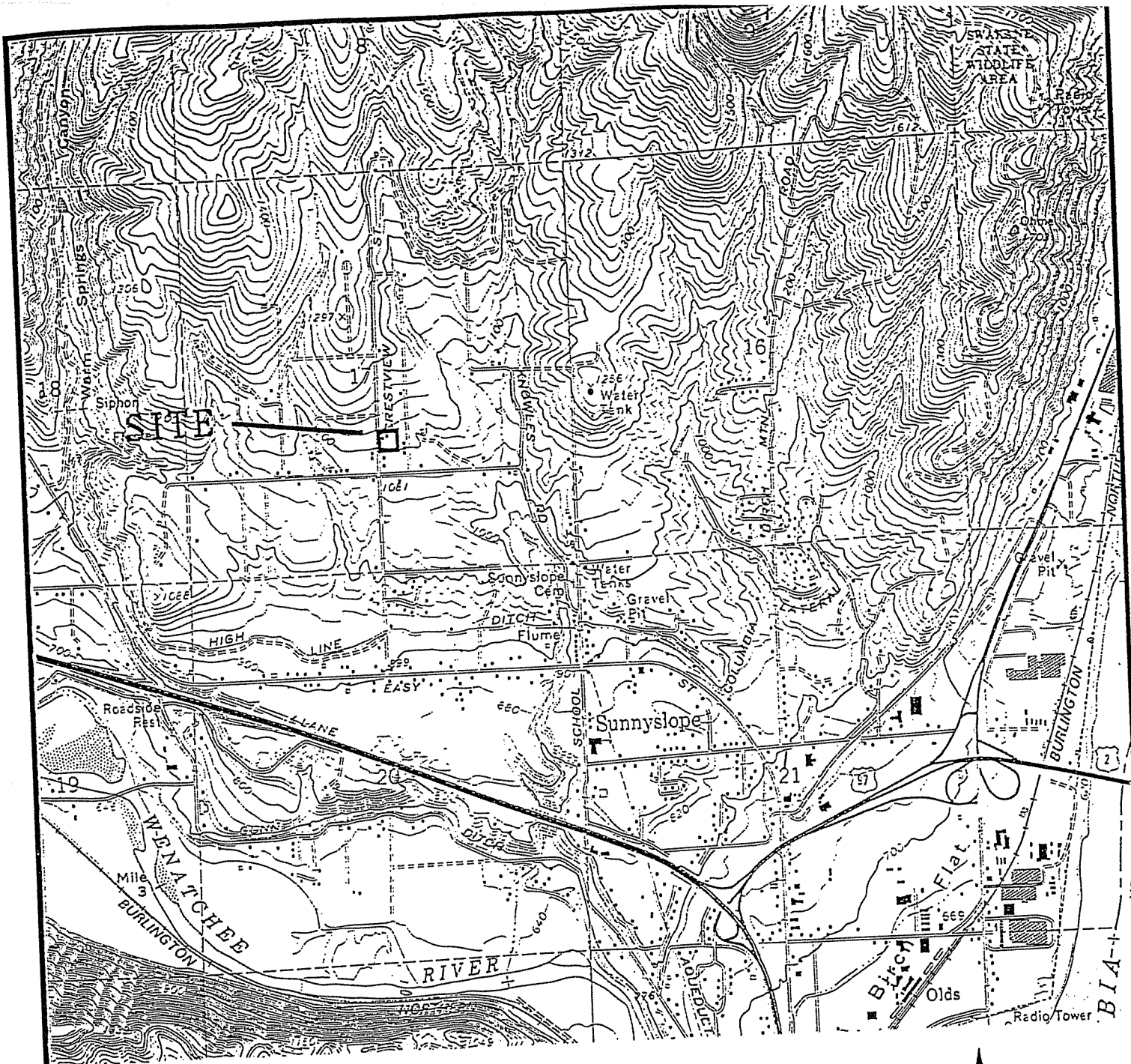
Attachments

TABLE 1
SUMMARY OF WATER CHEMICAL ANALYTICAL DATA
MONITORING WELLS AND WATER STORAGE TANK
BIRCHMOUNT ORCHARDS FACILITY
WENATCHEE, WASHINGTON

Well/Sample Number	Date Sampled	Gasoline-range Hydrocarbons(1) (mg/L)	BETX(2) (ug/L)				Comments
			B	E	T	X	
MW-1	7/15/94	<0.05	<1	<1	<1	<1	
MW-2	7/15/94	<0.05	<1	<1	<1	<1	
MW-3	6/17/94	1	-	-	-	-	Sampled at pump discharge
	7/1/94	13	-	-	-	-	Sampled from well
	7/8/94	30	-	-	-	-	Sampled from well
	7/15/94	-	-	-	-	-	Free product in well
MW-4	7/15/94	-	-	-	-	-	Well dry
MW-5	7/15/94	-	-	-	-	-	Well dry
WW-1(3)	7/1/94	0.12	-	-	-	-	
MTCA Method A cleanup level		1	5	30	40	20	

Notes:

- (1) By Ecology Method WTPH-G
(2) By EPA Method 8020. B = benzene, E= ethylbenzene, T = toluene and X = total xylenes
(3) Sample WW-1 obtained from 21,000-gallon steel tank
Chemical analytical services provided by Pacific Northern Analytical, Inc. of Redmond, Washington
mg/L = milligrams per liter
ug/L = micrograms per liter
- = not tested



WELLS & WADE BIRCHMOUNT ORCHARDS FACILITY: Wenatchee, Washington
 Supplemental Site Characterization Project
 By: ERM-Enviroclean Northwest, Inc. June, 1994

Figure 1. Site Vicinity Map.

Base: USGS Wenatchee 7.5 Topographic Quadrangle, 1966 (Photorevised 1987)



ERM

CRESTVIEW
LANE

u/g water line

MW-1

u/g water line

New UST

u/g electrical line

Four Bay Tractor &
Implement Storage
Building

Former USTs

B-4

MW-2

MW-3

MW-4

B-5

Equipment and
Storage Building

Office/Shop

MW-5

N

0 50 100

Scale in Feet

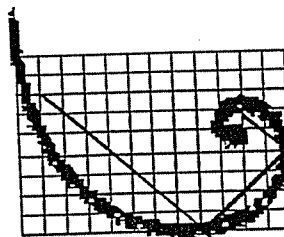
WELLS & WADE BIRCHMOUNT ORCHARDS FACILITY; Wenatchee, Washington
Groundwater Extraction Pilot Test Project
By: ERM-Enviroclean Northwest, Inc. August, 1994

Figure 2. Site Plan Map.

○ = Soil Boring

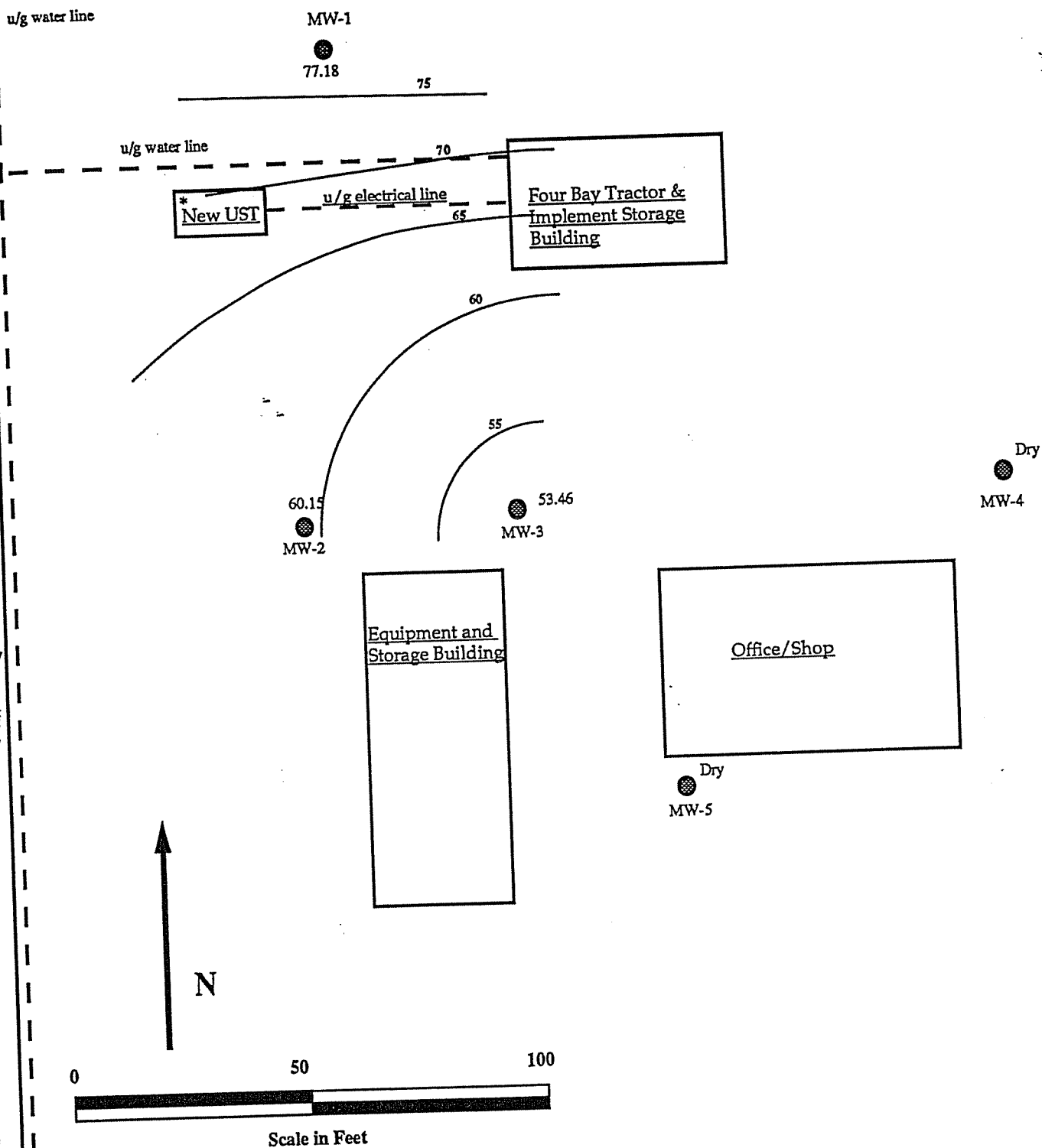
● = Monitoring Well

Note: All locations shown are approximate.



ERM

CRESTVIEW
LANE



WELLS & WADE BIRCHMOUNT ORCHARDS FACILITY; Wenatchee, Washington

Groundwater Extraction Pilot Test Project

By: ERM-Enviroclean Northwest, Inc. August, 1994

Figure 3. Potentiometric Surface Map.

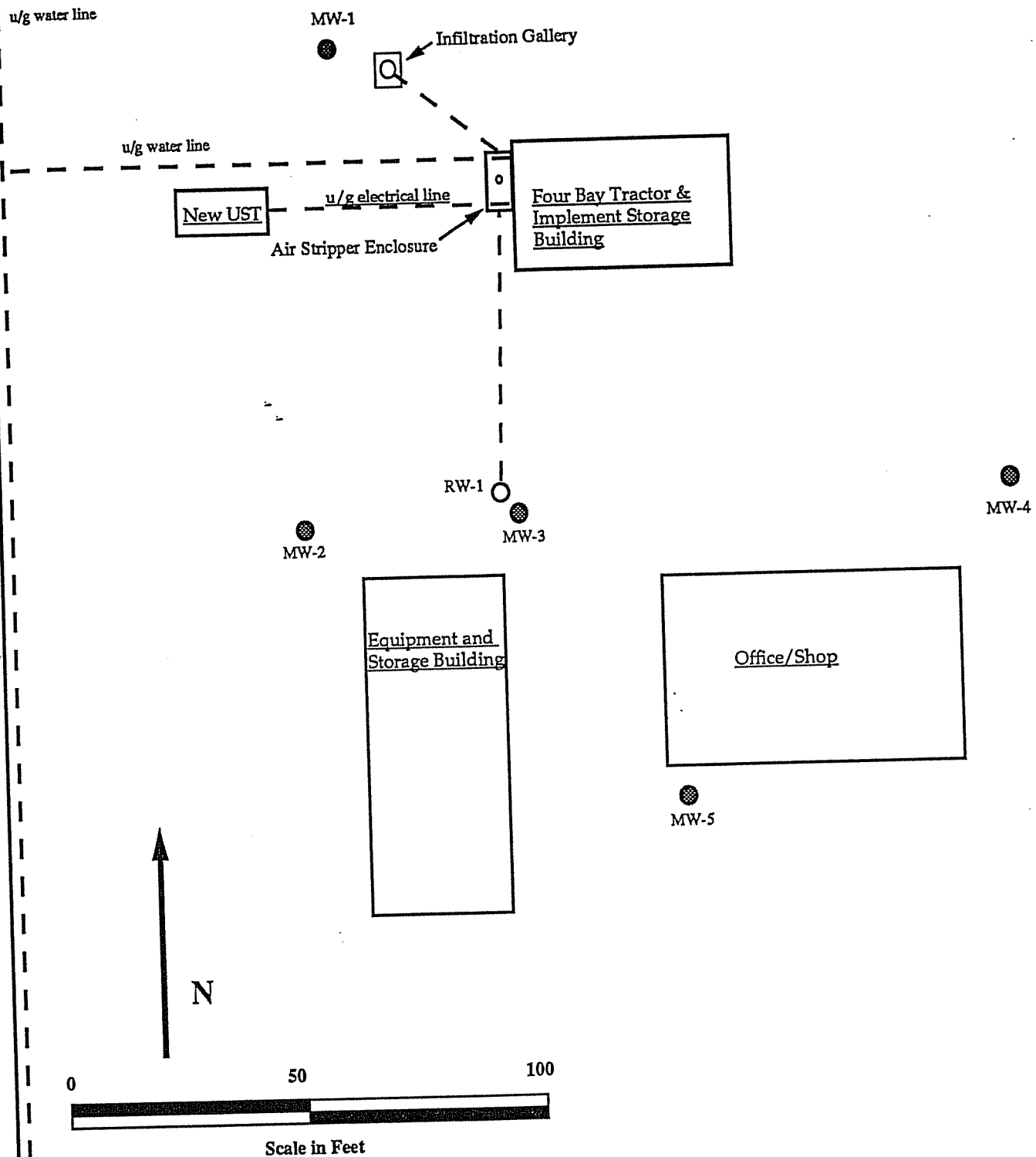
- Notes:
1. Water level measurements obtained July 8, 1994.
 2. Elevations shown are from a site-specific datum of 100.00 feet (shown by an *).
 3. All locations shown are approximate.

76.12 = Monitoring Well (with groundwater elevation)
 65 = Groundwater isoelevation contour



ERM

CRESTVIEW
LANE

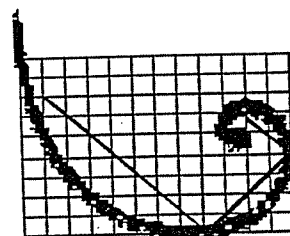


WELLS & WADE BIRCHMOUNT ORCHARDS FACILITY: Wenatchee, Washington
 Groundwater Extraction Pilot Test Project
 By: ERM-Enviroclean Northwest, Inc. August, 1994

Figure 4. Preliminary Remedial Design Map

- = Proposed Ground Water Extraction Well
- = Monitoring Well

Note: All locations shown are approximate.



ERM

ATTACHMENT A

CHEMICAL ANALYTICAL DATA



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest		Date Analyzed:	July 6, 1994
Project Name:	Birchmount		Sample Matrix:	Water
Project Number:	94009.02		Units:	ug/L
Batch Sample ID:	01416 QA			
Laboratory Batch #	01414			

Analyte	Reporting Limit	Sample Result	Duplicate Result	RPD	Acceptance Limit	Notes
Total Petroleum Hydrocarbons as Gasoline	50	200	170	16%	20%	

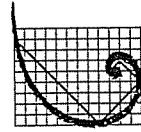
Analyte	Spike Added	Spike Recovery	Acceptance Range	Spike Dup Recovery	RPD	Acceptance Limit
Benzene	20	102%	75%-125%	108%	6%	20%

ATTACHMENT A

CHEMICAL ANALYTICAL DATA

Laboratory chemical analyses for samples included in this report were completed by Pacific Northern Analytical (PNA) in Redmond, Washington. Laboratory data sheets and chain-of-custody tracking forms are included in this Attachment.

PNA performed quality control/quality assurance (QA/QC) tests on all fuel sample batches completed for this report.



Our review of the QA/QC data provided by PNA did not identify any QA/QC concerns except for a duplicate relative percent difference out of control limits for sample MW-3 obtained on July 8, 1994. The laboratory indicated that the duplicate was reanalyzed with similar results because of matrix interference. The value obtained for the TPH-G concentration in that sample should be considered qualitative. It is EC-NW's opinion that the laboratory data are suitable for their intended use.

ERM

EnviroClean



**Pacific
Northern
Analytical, Inc.**

June 27, 1994

Mike Arnold
ERM Northwest
2821 Northup Way
Bellevue, WA 98004

Dear Mike:

Enclosed are the analytical results of samples submitted on June 20, 1994 from project Birchmount, 94009.02.

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cynthia Rezania', is written over the word 'Sincerely,'.

Cynthia Rezania
Project Chemist

CLR/lh

15314 N.E. 95th Street
Redmond, WA 98052-2517
(206) 881-7538 • Fax 881-8215



DOE WTPH-G

Client:	ERM Northwest	Date Sampled:	June 17, 1994
Project Name:	Birchmount	Date Received:	June 20, 1994
Project Number:	94009.02	Date Analyzed:	June 25, 1994
Client Sample ID:	MW-3	Sample Matrix:	Water
Laboratory Batch #	01369	Dilution Factor:	1
Units:	ug/L		

Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	1000		50

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	89%		71%-118%
4-Bromofluorobenzene	99%		70%-120%



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest		
Project Name:	Birchmount		
Project Number:	94009.02	Date Analyzed:	June 25, 1994
Sample ID:	Method Blank	Dilution Factor:	1
Laboratory Batch #	01369	Units:	ug/L
Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	87%		71%-118%
4-Bromofluorobenzene	86%		70%-120%

Notes

N.D.-Not detected above the reporting limit.



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest		Date Analyzed:	June 25, 1994
Project Name:	Birchmount		Sample Matrix:	Water
Project Number:	94009.02		Units:	ug/L
Batch Sample ID:	01369 QA			
Laboratory Batch #	01369			

Analyte	Reporting Limit	Sample Result	Duplicate Result	RPD	Acceptance Limit	Notes
Total Petroleum Hydrocarbons as Gasoline	50	1000	1000	<1%	20%	

Analyte	Spike Added	Spike Recovery	Acceptance Range	Spike Dup Recovery	RPD	Acceptance Limit
Total Petroleum Hydrocarbons as Gasoline	300	104%	75%-125%	114%	9%	20%

Notes

N.D.-Not detected above the reporting limit.

Pacific Northern Analytical

Chain of Custody/Analysis Request Form
Laboratory Batch Number: 01569

Client: <u>ERM-EC</u>		Report to: <u>Mike Arnold</u>		Project Name: <u>Byrdviewmont</u>		Project Number: <u>94009.02</u>	
Address: <u>2821 Northrup Way</u>							
Suite <u>100</u>							
Bellevue WA 98004							
Phone Number: <u>206 827 9440</u>							
Fax Number: <u>206 827 2408</u>							
Sample ID	Date	Sampled	Time	Matrix	Number of Containers		
-1 MW-3	10/17/94	1645		Water	4		
-2							
-3							
-4							
-5							
-6							
-7							
-8							
-9							
-10							
P.O. #	Turnaround Requested:		Sample Receipt:		Comments/Special Instructions:		
Bill to:	24 hr (+100%)		Condition				
	48 hr (+50%)		Cool? Yes No <u>XX</u>				
	Date needed <u>10/27/94</u>		Date: <u>10/27/94</u>				
Relinquished By: <u>C. Michael</u>			Time: <u>1200 noon</u>				
Company: <u>ERM-EC</u>			Date: <u>10/20/94</u>				
Received By: <u>Michael</u>			Time: <u>12:00 PM</u>				
Company: <u>ERM-EC</u>			Date: <u>10/20/94</u>				
Relinquished By: <u>Michael</u>			Time: <u>12:00 PM</u>				
Company: <u>ERM-EC</u>			Date: <u>10/20/94</u>				
Received By: <u>Michael</u>			Time: <u>12:00 PM</u>				
Company: <u>ERM-EC</u>			Date: <u>10/20/94</u>				

By signing this form, you are agreeing to the terms and conditions listed on the back.

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Pacific
Northern
Analytical, Inc.

RECEIVED
JUL 11 1994

July 7, 1994

ERM-NORTHWEST
BELLEVUE, WA

FILE #

Mike Arnold
ERM Northwest
2821 Northup Way
Bellevue, WA 98004

Dear Mike:

Enclosed are the analytical results of samples submitted on July 01, 1994 from project Birchmount, 94009.02.

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Cynthia Rezania', is written over the typed name.

Cynthia Rezania
Project Chemist

CLR/lh

15314 N.E. 95th Street
Redmond, WA 98052-2517
(206) 881-7538 • FAX 881-8215



DOE WTPH-G

Client:	ERM Northwest	Date Sampled:	July 1, 1994
Project Name:	Birchmount	Date Received:	July 1, 1994
Project Number:	94009.02	Date Analyzed:	July 6, 1994
Client Sample ID:	MW-3	Sample Matrix:	Water
Laboratory Batch #	01414	Dilution Factor:	50
Units:	ug/L		

Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	13,000		1000

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	91%		71%-118%
4-Bromofluorobenzene	98%		70%-120%



DOE WTPH-G

Client:	ERM Northwest	Date Sampled:	July 1, 1994
Project Name:	Birchmount	Date Received:	July 1, 1994
Project Number:	94009.02	Date Analyzed:	July 6, 1994
Client Sample ID:	WW-1	Sample Matrix:	Water
Laboratory Batch #	01414	Dilution Factor:	1
Units:	ug/L		

Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	120		50

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	96%		71%-118%
4-Bromofluorobenzene	99%		70%-120%



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest		
Project Name:	Birchmount		
Project Number:	94009.02	Date Analyzed:	July 6, 1994
Sample ID:	Method Blank	Dilution Factor:	1
Laboratory Batch #	01414	Units:	ug/L
Analyte	Sample Result	Notes	Reporting Limit

Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50
--	------	--	----

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	93%		71%-118%
4-Bromofluorobenzene	94%		70%-120%

Notes

N.D.-Not detected above the reporting limit.

Pacific Northern Analytical

Chain of Custody/Analysis Request Form
Laboratory Batch Number: 01414

Client: <u>ERM-EC</u>		Report to: <u>Mike Arnold</u>		Project Name: <u>Birkmount</u>		Project Number: <u>94009.02</u>	
Address: <u>2821 Northrup Way</u>				Suite <u>100</u>			
Bellevue WA 98004				Phone Number: <u>(206) 827 9440</u>			
Fax Number: <u>(206) 827 2408</u>				Sample ID			
Sample ID		Sampled	Date	Time	Matrix	Number of Containers	
-1	MW-3	7/1/94	11:15		Water		
-2	MW-1	7/1/94	11:35		Water		
-3							
-4							
-5							
-6							
-7							
-8							
-9							
-10							
P.O.#		Turnaround Requested:		Sample Receipt:		Comments/Special Instructions:	
Bill to:		24 hr (+100%)		Condition			
		48 hr (+50%)		Cool? Yes No			
		Date needed 7/8/94					
Relinquished By: <u>Mike Arnold</u>		Date: <u>7/1/94</u>					
Company: <u>ERM-EC</u>		Time: <u>3:30 PM</u>					
Received By: <u>James Stewart</u>		Date: <u>7/1/94</u>					
Company: <u>PNA</u>		Time: <u>3:30 PM</u>					
Relinquished By:		Date:					
Company:		Time:					
Received By:		Date:					
Company:		Time:					

By signing this form, you are agreeing to the terms and conditions listed on the back.

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**Pacific
Northern
Analytical, Inc.**

July 13, 1994

Mike Arnold
ERM Northwest
2821 Northup Way
Bellevue, WA 98004

RECEIVED
JUL 18 1994

ERM-NORTHWEST
BELLEVUE, WA

FILE #

Dear Mike:

Enclosed are the analytical results of samples submitted on July 11, 1994 from project Birchmount, 94009.02.

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cynthia Rezania', is written over a horizontal line.

Cynthia Rezania
Project Chemist

CLR/lh

15314 N.E. 95th Street
Redmond, WA 98052-2517
(206) 881-7538 • FAX 881-8215



DOE WTPH-G

Client:	ERM Northwest	Date Sampled:	July 8, 1994
Project Name:	Birchmount	Date Received:	July 11, 1994
Project Number:	94009.02	Date Analyzed:	July 11, 1994
Client Sample ID:	MW-3	Sample Matrix:	Water
Laboratory Batch #	01429	Dilution Factor:	10
Units:	ug/L		
Analyte	Sample Result	Notes	Reporting Limit

Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	30,000	500
--	--------	-----

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	101%		71%-118%
4-Bromofluorobenzene	117%		70%-120%



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest		
Project Name:	Birchmount		
Project Number:	94009.02	Date Analyzed:	July 11, 1994
Sample ID:	Method Blank	Dilution Factor:	1
Laboratory Batch #	01429	Units:	ug/L
Analyte	Sample Result	Notes	Reporting Limit

Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50
--	------	--	----

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	98%		71%-118%
4-Bromofluorobenzene	100%		70%-120%

Notes

N.D.-Not detected above the reporting limit.



DOE WTPH-G
Quality Control Data

Client:	ERM Northwest	
Project Name:	Birchmount	
Project Number:	94009.02	Date Analyzed: July 11, 1994
Batch Sample ID:	01429 QA	Sample Matrix: Water
Laboratory Batch #	01429	Units: ug/L

Analyte	Reporting Limit	Sample Result	Duplicate Result	RPD	Acceptance Limit	Notes
Total Petroleum Hydrocarbons as Gasoline	50	30,000	42,000	33%	20%	R

Batch Sample ID: Blank Spike

Analyte	Spike Added	Spike Recovery	Acceptance Range
Total Petroleum Hydrocarbons as Gasoline	300	98%	75%-125%

Notes

R-RPD outside control limits. Sample was reanalyzed with similar results indicating matrix interference.

Pacific Northern Analytical

Chain of Custody/Analysis Request Form
Laboratory Batch Number: 01429

Client: <u>ERM-EC</u>		Report to: <u>Mike Arnold</u>		Project Name: <u>Brickway</u>		Project Number: <u>94009.02</u>	
Address: <u>2821 Northrup Way</u>				Suite <u>100</u>			
Phone Number: <u>206 827 9440</u>				Fax Number: <u>206 827 2408</u>			
Sample ID		Sampled	Time	Matrix	Number of Containers		
<u>-1 MJ-3</u>		<u>7/8/94</u>	<u>1350</u>	<u>H₂O</u>	<u>2</u>		
<u>-2</u>							
<u>-3</u>							
<u>-4</u>							
<u>-5</u>							
<u>-6</u>							
<u>-7</u>							
<u>-8</u>							
<u>-9</u>							
<u>-10</u>							
P.O. #		Turnaround Requested:		Sample Receipt:			
Bill to:		<u>RM 24 hr (+100%)</u>		Condition			
		<u>48 hr (+50%)</u>		Cool? Yes No			
		<u>7/13/94</u>		Date: <u>7/11/94</u>			
Relinquished By: <u>Michael P. ...</u>				Time: <u>7/11/94</u>			
Company: <u>ERM-EC</u>				Date: <u>7/11/94</u>			
Received By: <u>James ...</u>				Time: <u>1:40pm</u>			
Company: <u>PNV</u>				Date: <u>7/11/94</u>			
Relinquished By: <u>James ...</u>				Time: <u>7/11/94</u>			
Company: <u>PNV</u>				Date: <u>7/11/94</u>			
Received By: <u>James ...</u>				Time: <u>7/11/94</u>			
Company: <u>PNV</u>				Date: <u>7/11/94</u>			
By signing this form, you are agreeing to the terms and conditions listed on the back.		Comments/Special Instructions: <u>No HCl</u>					



**Pacific
Northern
Analytical, Inc.**

RECEIVED
JUL 25 1994

July 21, 1994

ERM-NORTHWEST
BELLEVUE, WA

FILE #

Mike Arnold
ERM Northwest
2821 Northup Way
Bellevue, WA 98004

Dear Mike:

Enclosed are the analytical results of samples submitted on July 18, 1994 from project Birchmount, 94009.02.

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

Cynthia Rezania
Project Chemist

CLR/lh

15314 N.E. 95th Street
Redmond, WA 98052-2517
(206) 881-7538 • FAX 881-8215



DOE WTPH-G with BTEX (EPA 8020) distinction

Client:	ERM Northwest	Date Sampled:	July 15, 1994
Project Name:	Birchmount	Date Received:	July 18, 1994
Project Number:	94009.02	Date Analyzed:	July 20, 1994
Client Sample ID:	MW-1	Sample Matrix:	Water
Laboratory Batch #	01455	Dilution Factor:	1
Units:	ug/L		
Analyte	Sample Result	Notes	Reporting Limit

Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50
Benzene	N.D.		1
Toluene	N.D.		1
Ethylbenzene	N.D.		1
m- & p-Xylene	N.D.		1
o-Xylene	N.D.		1

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	99%		71%-118%
4-Bromofluorobenzene	103%		70%-120%

Notes

N.D.-Not detected above the reporting limit.



DOE WTPH-G with BTEX (EPA 8020) distinction

Client:	ERM Northwest	Date Sampled:	July 15, 1994
Project Name:	Birchmount	Date Received:	July 18, 1994
Project Number:	94009.02	Date Analyzed:	July 20, 1994
Client Sample ID:	MW-2	Sample Matrix:	Water
Laboratory Batch #	01455	Dilution Factor:	1
Units:	ug/L		

Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50
Benzene	N.D.		1
Toluene	N.D.		1
Ethylbenzene	N.D.		1
m- & p-Xylene	N.D.		1
o-Xylene	N.D.		1

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	97%		71%-118%
4-Bromofluorobenzene	102%		70%-120%

Notes

N.D.-Not detected above the reporting limit.



DOE WTPH-G with BTEX (EPA 8020) distinction
Quality Control Data

Client:	ERM Northwest		
Project Name:	Birchmount		
Project Number:	94009.02	Date Analyzed:	July 20, 1994
Sample ID:	Method Blank	Dilution Factor:	1
Laboratory Batch #	01455	Units:	ug/L

Analyte	Sample Result	Notes	Reporting Limit
Total Petroleum Hydrocarbons as Gasoline (Toluene to dodecane)	N.D.		50
Benzene	N.D.		1
Toluene	N.D.		1
Ethylbenzene	N.D.		1
m- & p-Xylene	N.D.		1
o-Xylene	N.D.		1

Surrogate Recoveries	% Recovery	Notes	Acceptance Range
Fluorobenzene	97%		71%-118%
4-Bromofluorobenzene	102%		70%-120%

Notes

N.D.-Not detected above the reporting limit.



DOE WTPH-G with BTEX (EPA 8020) distinction
Quality Control Data

Client:	ERM Northwest				
Project Name:	Birchmount				
Project Number:	94009.02			Date Analyzed:	July 20, 1994
Batch Sample ID:	01455 QA			Sample Matrix:	Water
Laboratory Batch #	01455			Units:	ug/L

Analyte	Reporting Limit	Sample Result	Duplicate Result	RPD	Acceptance Limit	Notes
---------	-----------------	---------------	------------------	-----	------------------	-------

Total Petroleum

Hydrocarbons

as Gasoline

	50	N.D.	N.D.	--	20%
--	----	------	------	----	-----

Benzene	1	N.D.	N.D.	--	20%
---------	---	------	------	----	-----

Toluene	1	N.D.	N.D.	--	20%
---------	---	------	------	----	-----

Ethylbenzene	1	N.D.	N.D.	--	20%
--------------	---	------	------	----	-----

m- & p-Xylene	1	N.D.	N.D.	--	20%
---------------	---	------	------	----	-----

o-Xylene	1	N.D.	N.D.	--	20%
----------	---	------	------	----	-----

Analyte	Spike Added	Spike Recovery	Acceptance Range	Spike Dup Recovery	RPD	Acceptance Limit
---------	-------------	----------------	------------------	--------------------	-----	------------------

Benzene	20	105%	75%-125%	106%	1%	20%
---------	----	------	----------	------	----	-----

o-Xylene	20	105%	75%-125%	106%	1%	20%
----------	----	------	----------	------	----	-----

Notes

N.D.-Not detected above the reporting limit.

Pacific Northern Analytical

Chain of Custody/Analysis Request Form

Laboratory Batch Number: _____

Client: <u>ERM-EC</u>		Report to: <u>Mike Arnold</u>		Project Name: <u>Birlmont</u>		Project Number: <u>94009.02</u>	
Address: <u>2821 Northrup Way</u>							
<u>Suite 100</u>							
<u>Bellevue WA 98004</u>							
Phone Number: <u>827-9440</u>							
Fax Number: <u>827-2408</u>							
Sample ID	Date	Sampled	Time	Matrix	Number of Containers		
-1 MW-1	7/15/94	1510		H ₂ O	Halogenated Volatiles 8240		
-2 MW-2	7/15/94	1530		H ₂ O	Volatile Aromatics 602/8020		
-3					Phenols 625/8270		
-4					Pesticides/ PCB'S 608/8080		
-5					PAH's 610/8310		
-6					Chlorinated Herbicides 8150		
-7					Volatile Organics 624/8240		
-8					BNA's 625/8270		
-9					DEQ TPH-G <u>WTPH-G w/BTEX</u>		
-10					WTPH-418.1/DEQ TPH-418.1		
					WTPH-HCID/DEQ HCID		
					WTPH-D/DEQ TPH-D		
					WTPH-D Extended		
					Metals: (Total or Dissolved) List below		
					TCLP Metals / VOA / SemiVOA / Pest & Herb		
					TOC/ TOX / TX		
P.O.#	Turnaround Requested:			Sample Receipt:			
Bill to:	24 hr (+100%)			Condition			
	48 hr (+50%)			Cool? Yes No			
	Date needed <u>7/25/94</u>			Date: <u>7/18/94</u>			
Relinquished By: <u>[Signature]</u>							
Company: <u>ERM-EC</u>							
Received By: <u>[Signature]</u>							
Company: <u>PAV</u>							
Relinquished By: _____							
Company: _____							
Received By: _____							
Company: _____							

Comments/Special Instructions:

WTPH-G only for MW-1

No HCl preservative

By signing this form, you are agreeing to the terms and conditions listed on the back.

Distribution: White - Return to Originator; Yellow - Lab; Pink - Retained by Originator

ATTACHMENT B

LAND APPLICATION LETTER

August 3, 1994

Mr. Chuck Wallin
Washington State Department of Ecology
Central Region Office
106 South 6th Avenue
Yakima, Washington 98902-3387

2821 Northup Way
Suite 100
Bellevue, WA 98004-1439
(206) 827-9574
(206) 827-2408 (Fax)

RE: Land Application of Discharge Water from Aquifer Testing,
Birchmount Orchards Facility, Wenatchee, Washington

Dear Mr. Wallin:

I am submitting this letter in accordance with your request during our telephone conversation on July 18, 1994 during which we discussed requirements for land application of water from aquifer testing at a leaking underground storage tank (LUST) site. During our conversation you stated that land application requirements included (1) that the water to be discharged contained petroleum hydrocarbon concentration less than MTCA Method A cleanup levels, and (2) a letter would be submitted to the Washington State Department of Ecology briefly describing the land application and including chemical analytical results for the applied water.

Approximately 9,000 gallons of water were generated during aquifer testing at a LUST site located at the Birchmount Orchards facility at 3717 Crestview Drive in Wenatchee, Washington. The water was stored on-site in a transportable liquid storage tank pending analysis and disposal.

Analytical results for a water sample obtained from the storage tank are attached. Gasoline-range hydrocarbons were detected in the sample at a concentration less than the MTCA Method A cleanup level. Water in the storage tank was discharged to a grassy area at the site on July 20, 1994.

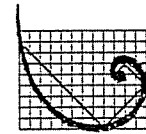
Should you have any questions regarding this letter, please call me at (206) 827-9574. Thank you for your consideration of this matter.

Sincerely,

ERM-ENVIROCLEAN NORTHWEST, INC.



A. Michael Arnold
Project Geologist



ERM
EnviroClean