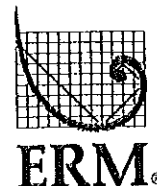


Environmental
Resources
Management

915 118th Avenue S.E.
Suite 130
Bellevue, WA 98005
(425) 462-8591
(425) 455-3573 (Fax)

29 May 2001

Ms. Roxann McKinstry
Dole Fresh Vegetables
P.O. Box 1759
Salinas, California 93902



Subject: Remedial Action Report
In Situ Chemical Oxidation
Former Birchmount Orchard Facility
Wenatchee, Washington

Wells & Wade

*FS# 83451357
UST # 200532*



Dear Ms. McKinstry:

Environmental Resources Management (ERM) is providing the following remedial action report to Dole Foods Company (Dole) for in situ chemical oxidation activities completed in December 2000 and April 2001 at the former Birchmount Orchard facility in Wenatchee, Washington. This remediation program was completed to address groundwater contaminated with petroleum hydrocarbons released from a former underground storage tank (UST) system. The work completed for this project was in general accordance with the scope of work outlined in ERM's proposal to Dole dated 12 October 2000.

The former Birchmount Orchard facility is located at 3717 Crestview Road, approximately one mile north of Highway 97. A site plan is included as Figure 1 of this report.

REGULATORY OVERVIEW

Releases of petroleum products to groundwater from USTs in Washington are regulated under the UST Regulations (Chapter 173-340 Washington Administrative Code [WAC]) and the Model Toxics Control Act (MTCA) (Chapter 173-340 WAC). The MTCA regulation establishes the remediation goals for contaminants related to petroleum releases from UST systems to groundwater. The MTCA Method A Groundwater Cleanup Levels (Chapter 173-340-740 WAC) applicable to this remedial action are as follows:





<u>Analyte</u>	<u>MTCA Method A</u> <u>Groundwater Cleanup Level</u>
Gasoline-Range Hydrocarbons	1,000 micrograms per liter ($\mu\text{g}/\text{l}$)
Benzene	5 $\mu\text{g}/\text{l}$ <i>DO if Benzene present</i>
Toluene	40 $\mu\text{g}/\text{l}$
Ethylbenzene	30 $\mu\text{g}/\text{l}$
Total Xylenes	20 $\mu\text{g}/\text{l}$

BACKGROUND

Gasoline-range hydrocarbons (TPH-G) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were identified in soil and groundwater following the removal of three steel USTs from the site in 1993. Accessible impacted soils were removed down to the water table (approximately 20 feet below ground surface) in 1993.

In 1994, a groundwater extraction and treatment system was installed and full time operation of the system began in early 1995. The system was operated until late 1998, at which point it was determined that the system was no longer effectively remediating the site. Although significant reduction of groundwater TPH-G and BTEX concentrations were observed during the remedial system operation, groundwater sampling in 1999 and 2000 indicated that contaminants remained at concentrations greater than the MTCA Method A Groundwater Cleanup Levels. Groundwater sampling data from this period indicated TPH-G concentrations in groundwater ranged from approximately 1,000 to 2,000 $\mu\text{g}/\text{l}$ (Table 1).

Soils at the site consist of approximately 25 feet of medium to coarse sand overlying weathered sedimentary rock ranging from silty sand to clayey silt. Groundwater levels at the site range seasonally from approximately 18 to 22 feet below ground surface. Based on available water level data, the groundwater flow direction across the contaminated area is toward the south-southeast.

In autumn 2000, Dole suspended orchard operations at the site and sold the property. Dole expressed interest in implementing a cost-effective, aggressive remediation technique to decrease gasoline concentrations in groundwater to expedite site cleanup and limit ongoing environmental liability at the site. In situ chemical oxidation was identified as the most reasonable remediation method available to meet Dole's needs. ERM designed an in situ chemical oxidation work plan for the site as outlined in the document titled *In Situ Chemical Oxidation Work Plan and Proposal, Birchmount Orchard Facility*,

11
(1)
11
11
11
11
11
11
(1)
11
11
11
11
11
11
(1)

Wenatchee, Washington, dated 12 October 2000. The scope of work described in this document is summarized below.

SCOPE OF WORK

ERM completed the following tasks during the in situ chemical oxidation program at the former Birchmount Orchard facility:

- Obtained an Underground Injection Permit from the Washington State Department of Ecology (Attachment A);
- Injected approximately 1,000 gallons of 2.5-percent potassium permanganate solution into well RW-1 and three direct-push borings;
- Collected groundwater samples from wells RW-1 and MW-3 immediately prior to the injection of the in situ chemical oxidation solution and approximately 14 weeks and 18 weeks after the injection was completed; and
- Submitted the groundwater samples for laboratory analysis of TPH-G by Washington State Department of Ecology Method NWTPH-Gx and BTEX by United States Environmental Protection Agency (USEPA) Method 8021B with confirmation by USEPA Method 8260B, as necessary.

IN SITU CHEMICAL OXIDATION

The area identified for the in situ chemical oxidation was within the area of contaminated groundwater extending from the former UST locations through the vicinity of recovery well RW-1 and monitoring well MW-3 (Figure 1).

On 21 December 2000, approximately 500 gallons of 2.5-percent potassium permanganate solution were injected into well RW-1. The solution was mixed in a 1,100-gallon polyethylene container using powdered potassium permanganate and water from a local municipal source. The solution was injected into the well at a pressure of approximately 10 pounds per square inch at a rate of approximately 5 gallons per minute. On 22 December 2000, an additional 500-gallon batch of 2.5-percent potassium permanganate solution was injected into three borings (P-1, P-2, and P-3 on Figure 1) completed by Cascade Drilling of Woodinville, Washington, using a direct-push drilling rig. Approximately 170 gallons of solution were pumped into each boring at a pressure of approximately 15 pounds per square inch at a rate of approximately 5 gallons per minute.



GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected from wells RW-1 and MW-3 on 21 December 2000 prior to beginning injection of the potassium permanganate solution. Groundwater samples were collected from the wells on 10 April 2001 to evaluate groundwater quality near the anticipated time limit of the remedial effectiveness of the potassium permanganate solution. An additional set of groundwater samples was collected from the wells on 3 May 2001 to confirm the April 2001 results.

Groundwater Sample Collection

Groundwater samples were collected from the wells after approximately three well casing volumes had been evacuated. Monitoring well purging and sampling were completed using disposable polyethylene bailers and new nylon rope or a submersible pump with disposable polyethylene tubing.

Each sample container was labeled with the sample location, sample number, date, time, and sampler's initials. The samples were chilled during transport to North Creek Analytical, Inc.'s laboratory in Bothell, Washington, for analysis. Chain-of-custody procedures were followed during sample preparation, shipment, and handling. Chain-of-custody and laboratory quality assurance/quality control documentation is included with the laboratory data sheets in Attachment B. Available laboratory analytical results for wells RW-1 and MW-3 are summarized on Table 1.

BTEX results of analysis by USEPA Method 8021B for several samples were flagged by the laboratory as estimated maximum concentrations due to coelution with other compounds. These samples were reanalyzed for BTEX using USEPA Method 8260B, which provided better resolution of the BTEX compound concentrations. On Table 1, the USEPA Method 8260B results are reported for BTEX in lieu of the USEPA Method 8021B results, where available.

Groundwater Sample Analytical Results

Groundwater samples collected on 21 December 2000 prior to the introduction of the potassium permanganate solution indicated that TPH-G concentrations in both wells and benzene and total xylene concentrations in well RW-1 were greater than the MTCA Method A Groundwater Cleanup Levels. The benzene concentration detected in the sample from well RW-1 (59.7 µg/l) was anomalously high compared to historical groundwater quality data from that well (Table 1).

1
(2)
1
1
1
1
1
1
1
(2)
1
1
1
1
1
1
1
(2)

At RW-1, groundwater samples collected in April and May 2001 indicated that TPH-G and total xylene concentrations had decreased to below the MTCA Method A Groundwater Cleanup Levels, but benzene concentrations increased. The benzene concentrations detected (177 and 161 $\mu\text{g}/\text{l}$, respectively) are the highest benzene concentrations detected at the site to date.

Groundwater samples collected in April and May 2001 at MW-3 indicate that TPH-G and BTEX concentrations generally increased at the well between December 2000 and April 2001. TPH-G and total xylene concentrations at well MW-3 in April 2001 were greater than the MTCA Method A Groundwater Cleanup Levels.

In May 2001, TPH-G and BTEX concentrations were generally similar to April, except for total xylenes, which decreased to a concentration less than the MTCA Method A Groundwater Cleanup Level.

CONCLUSIONS AND RECOMMENDATIONS

Available data indicate that the potassium permanganate solution injections at the site have generally decreased contaminant concentrations in groundwater in the vicinity of RW-1 with the exception of benzene; however, contaminant concentrations at MW-3 do not appear to have been significantly affected by the application. Also, the source of elevated benzene concentrations at RW-1 is unclear, although it is speculated that the injection of fluids at the borings in the area of the former USTs may have mobilized contaminants that were hydraulically isolated from the groundwater extraction system operated at the site in 1995 through 1998.

Because of the variability of aquifer materials in the area impacted by the petroleum release, it is suspected that preferential pathways in coarser-grained soils and along fractures dominate the groundwater flow regime. These preferential pathways effectively isolate areas of finer-grained soils from available active remedial technologies available to address the contamination at the site.

A monitored natural attenuation remedial approach is recommended for the site because the effectiveness of further active remediation appears limited due to site conditions. Other site conditions, such as the relatively low concentration of contaminants remaining in groundwater and the lack of groundwater receptors near the site, also indicates that monitored natural attenuation is appropriate for remediation at this site. Monitored natural

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

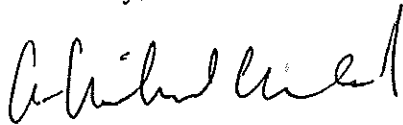
18

attenuation consists of periodic groundwater quality monitoring to evaluate the rate of degradation of contaminants through natural processes, such as biologic activity. The rate of natural attenuation and the time necessary to complete site remediation depends on hydrogeologic conditions and the geochemistry of the aquifer and varies significantly among sites.

ERM recommends that the monitored natural attenuation program include annual groundwater quality monitoring in March of each year until contaminant concentrations are less than the MTCA Method A Cleanup Levels. At that point, three additional quarterly monitoring events should be completed to confirm that contaminant concentrations comply with MTCA requirements. March is recommended as an appropriate time to sample groundwater because historical contaminant concentrations at the site are typically greatest during the winter and early spring months. Snow accumulation and freezing conditions during the winter months often limit access to the monitoring wells; however, the site is typically snow-free by March. Groundwater samples should be collected from wells RW-1 and MW-3 during each event.

If you have any questions regarding this submittal, please call either of us at (425) 462-8591.

Sincerely,



A. Michael Arnold
Project Manager



Timothy S. McCormack, R.G.
Principal, Northwest Operations

AMA/TSM/dwb/2624.20
attachments(2)

cc: Ms. Sharon Hayes, Dole Food Company
Washington State Department of Ecology Central Region Office

11
(1)
11
11
(1)
11
11
(1)
(1)
11
11
(1)
11
11
(1)
11
(1)
11
(1)

Figure

11
(1)
11
11
11
11
11
11
(1)
11
11
11
11
11
11
(1)

CRESTVIEW DRIVE

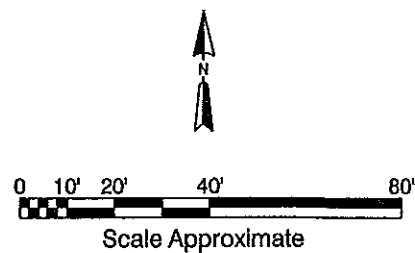
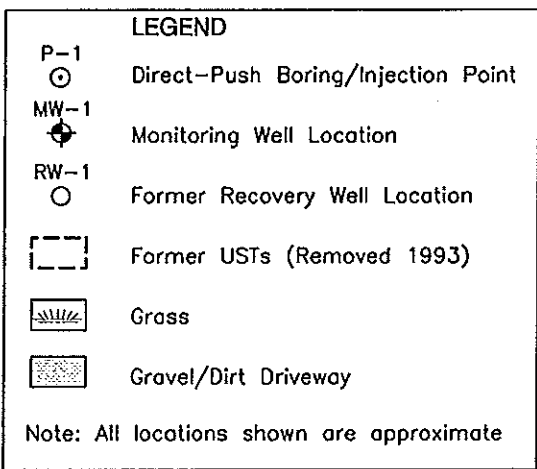
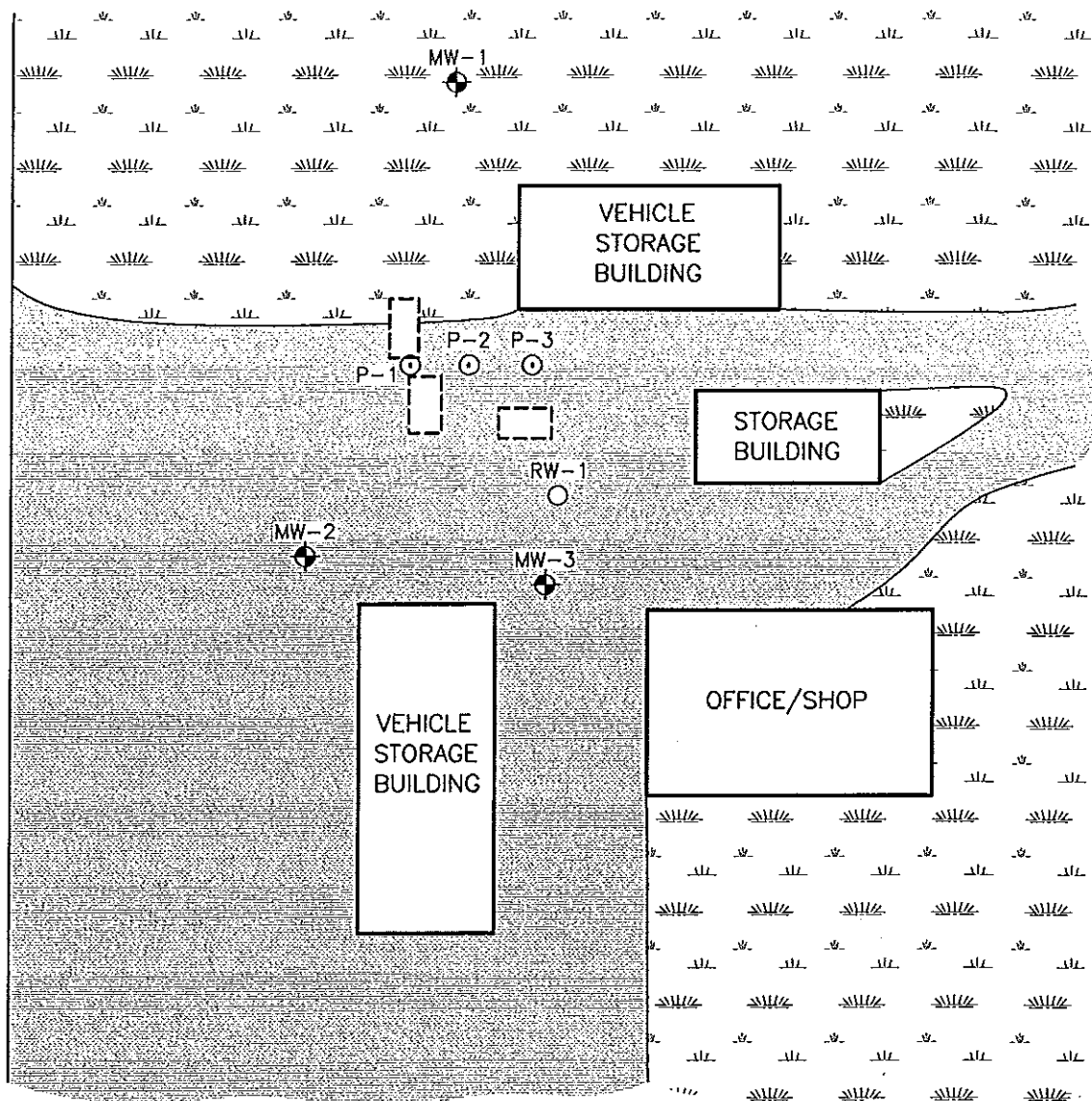


Figure 1
Site Plan
 Former Birchmount Orchard Facility
 Wenatchee, Washington

► [Download the full report.](#)

1.

Abstract

1

Figure 1

Figure 1

(a) H_2O molecule structure

(b) H_2O molecule structure

1. *Phragmites australis* (Cav.) Trin. ex Steud.
 2. *Phragmites australis* (Cav.) Trin. ex Steud.

1000

(11)

—

1. *Author's address:* Department of Mathematics, University of California, San Diego, 950 University Ave., San Diego, CA 92093, U.S.A. (e-mail: shrawan@math.ucsd.edu)

1990-1991

100

100

10

Table

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

TABLE 1
Summary of Groundwater Analytical Data
Wells RW-1 and MW-3
Birchmount Orchard Facility
Wenatchee, Washington

Well Number	Date Sampled	Gasoline-range Hydrocarbons ² (µg/l)	BTEX ³ (µg/l)			
			B	T	E	X
RW-1 ¹	12/29/94	3,000	14	19	9	151
	2/27/95	2,100	16	15	13	73
	2/27/95	3,800	36	14	28	164
	2/27/95	4,000	49	35	32	185
	3/6/95	2,800	16	22	4	110
	3/6/95	2,800	16	23	4	109
	3/6/95	4,500	15	26	7	120
	5/19/95	2,200	<1	14	5.3	57
	8/23/95	1,600	11	5.9	2.7	56.5
	11/20/95	2,000	14	7.7	3.9	74
	3/18/96	17,000	72	43	77	100
	5/24/96	1,500	2.5	1.8	3.1	17
	8/19/96	1,500	20	3.8	8.8	31
	3/7/97	2,500	26	22	17	70
	5/30/97	1,900	32	2.2	5.1	43
	8/13/97	880	5.0	1.9	1.1	19
	11/20/97	360	0.6	<0.50	<0.50	4.5
	3/17/98	1,300	16.0	4.8	3.6	32
	6/17/98	410	7.9	3.4	1.4	14
	9/8/98	1,900	12	1.5	3.2	19
	11/23/98	170	2.3	<1	<1	6.1
	12/21/00	1,090	59.7	2.28	7.97	28.5
	4/10/01	733	177	<2.50	<2.50	16.4
	5/3/01	698	161	<2.50	<2.50	15.8
MW-3	7/8/94	30,000	-	-	-	-
	12/29/94	74,000	<1	<20	52	130
	5/19/95	21,000	<5	100	36	160
	8/23/95	37,000	<1	44	26	115
	11/20/95	3,300	9.3	6.2	5.6	26
	3/18/96	1,900	25	20	7.4	35
	5/24/96	2,700	<0.50	4.5	9.0	22
	8/19/96	4,500	24	19	18	37
	3/7/97	11,000	<5.0	14	19	65
	5/30/97	2,700	16	12	5.3	18
	8/13/97	4,200	<0.50	7.7	6.2	27
	11/20/97	5,600	<0.50	12	6.9	28
	3/17/98	2,100	1.2	4.1	3.2	14
	6/17/98	6,100	21	7.8	13	28
	9/8/98	1,600	14	7.2	2.7	14
	11/23/98	3,400	<1	<1	8.6	24
	2/25/99	990	<1	4.0	6.0	6.0
	5/6/99	963	<13.4 ⁴	<2.40	<2.20	13.7
	8/10/99	1,030	<5.22 ^{4,5}	<1.20	<1.12	7.60
	11/18/99	1,980	<16.6 ^{4,5}	<2.90	<3.40	14.8
	7/18/00	1,500	2.02	<1.84	<1.73	<12.4
	12/21/00	1,430	<2.00	<0.722	<2.16	13.8
	4/10/01	2,230	4.69 ⁶	3.22 ⁶	2.48 ⁶	22.0 ⁶
	5/3/01	1,820	2.84	5.39	2.30	3.66
MTCA Method A cleanup level		1,000	5	40	30	20

Notes:

¹Well RW-1 samples from 1994 through 1998 collected as groundwater treatment system influent samples.

²By Ecology Method WTPH-G or NWTPH-Gx.

³By USEPA Method 8020 or 8021. B = benzene, T = toluene, E = ethylbenzene, and X = total xylenes.

⁴Detection limit for benzene increased due to coelution interference.

⁵Benzene concentration of <1 µg/l confirmed by USEPA Method 8260 analysis.

⁶By USEPA Method 8260B.

µg/l = micrograms per liter

- = Not tested

11
(11
11
11
11
11
11
11
(11
11
11
11
11
11
(11
11

ATTACHMENT A

UNDERGROUND INJECTION PERMIT

1
(1)
1
1
1
1
1
1
1
(1)
1
1
1
1
1
(1)
1



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

December 11, 2000

Ms. Roxann McKinstry
Dole Fresh Vegetables, Inc.
P.O. Box 1759
Salinas, CA 93902-1759

RE: Registration with the Underground Injection Control (UIC) Program, Birchmount Orchard, Wenatchee, WA

Dear Ms. McKinstry:

This letter is to acknowledge receipt of your registration forms dated November 28, 2000 requesting registration with the UIC program to inject potassium permanganate solution into an injection well located at the above-mentioned site.

The site is registered as UIC site 12126. Please refer to this number in all correspondence concerning this site. Also contact us when the system is closed and describe the closure method.

Please contact me at (360) 407-6143 or maha461@ecy.wa.gov or Diane Dent-White at (360) 407-6616 if you have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Mary Shaleen-Hansen", is positioned above the typed name.

Mary Shaleen-Hansen
UIC Coordinator
Water Quality Program

Cc: Mike Arnold



For Department of Ecology Use
UIC Site ID _____ Date Entered _____ Acknowledged _____ WRIA _____

Please complete to the best of your knowledge and return to: UIC Coordinator, Water Quality Program, Department of Ecology, PO Box 47600, Olympia, WA 98504-7600; Fax (360) 407-6426. Attachments to provide additional information are welcomed. Thank you.

REGISTRATION FORM

AQUIFER REMEDIATION WELL (CLASS 5X26)*

- Facility: Birchmount Orchard
Address: 3717 Crestview Road City Wenatchee
Zip: 98807 County Chelan Phone _____
Township: 23N Range 20E Section 17 $\frac{1}{4}$ Section NW $\frac{1}{4}$ $\frac{1}{4}$ Section SE
Cross Streets: North/South Crestview Road East/West American Fruit Road
Latitude NA Longitude NA
Other: _____
- Contact: Mike Arnold - ERM Phone 425 462-8591
Address: 915 118th Avenue SE Suite 130
Bellevue, WA 98005
- Owner/Operator: Dole Fresh Vegetables, Inc. Phone 831 678-5431
Address: Attn: Ms. Roxann McKinstry
PO Box 1759 Salinas, CA 93902
- Injection Start Date: 12/13/00 Date Completed: 12/15/00
- Cleanup Type: CERCLA ☐ RCRA ☐ MTCA Independent ☒ MTCA Order ☐ Order ☐
- Water Discharge Permit Number: ST-9186 Issued By Ecology (R. Frye)
- Existing Ground Water Quality: See attached Table 1

*Wells for the purpose of this registration inject stormwater not contaminated by commercial or industrial sources and are either greater than 50 feet deep, or inject through confining layers, or inject directly into ground water.

8. Number and Description of Wells/Trenches: RW-1 well construction
details attached
9. Ground water is _____ ft above/below (circle which) bottom of well. Date / /
Based on: Well log ☐ Measurement ☐ Estimate ☐ from _____
10. Injected Fluid: Source Municipal Water Supply Volume 1,000 gallons ^{total} per day
Constituents/Concentration 2.5% potassium permanganate solution

Treatment Methods None

11. Geology: See attached RW-1 boring log

12. Comments: _____

13. Location Sketch

See attached Figures

14. Completed by: Arthur A. Auel Date: 11/28/00

TABLE 1
Summary of Most Recent Groundwater Analytical Data
Monitoring Well MW-3
Birchmount Orchard Facility
Wenatchee, Washington

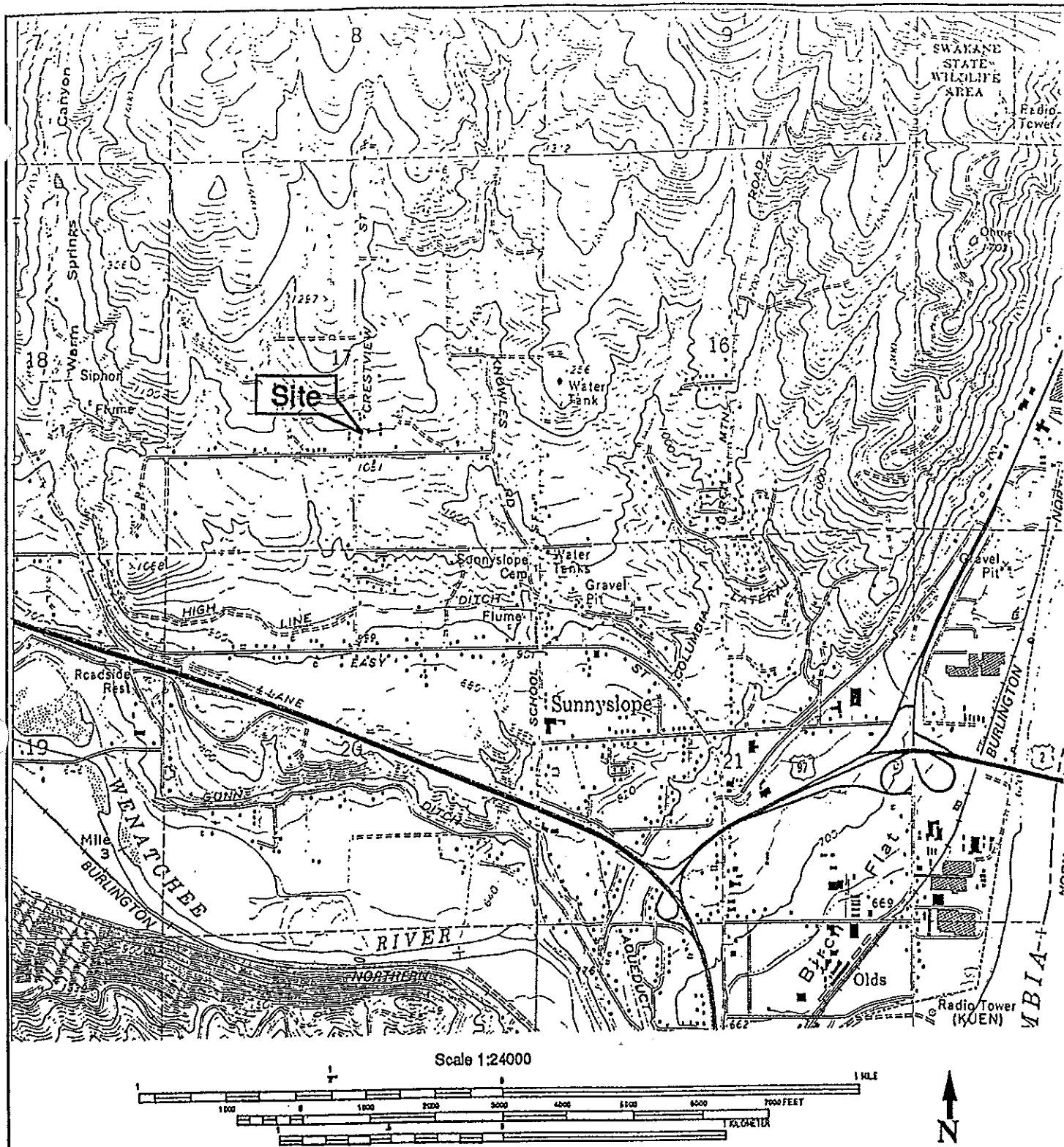
Well Number	Date Sampled	Gasoline-range Hydrocarbons(1) (µg/l)	BTEX(2) (µg/l)			
			B	T	E	X
MW-3	7/18/00	1,500	2.02	<1.84	<1.73	<12.4
MTC A Method A cleanup level		1,000	5	40	30	20

Notes:

(1) By Ecology Method NWTPH-Gx.

(2) By USEPA Method 8021B. B = benzene, T = toluene, E= ethylbenzene, and X = total xylenes.

µg/l = micrograms per liter



BIRCHMOUNT ORCHARD FACILITY; Wenatchee, Washington
 Groundwater Remediation System Installation Project
 By: ERM-Enviroclean Northwest, Inc. February, 1995

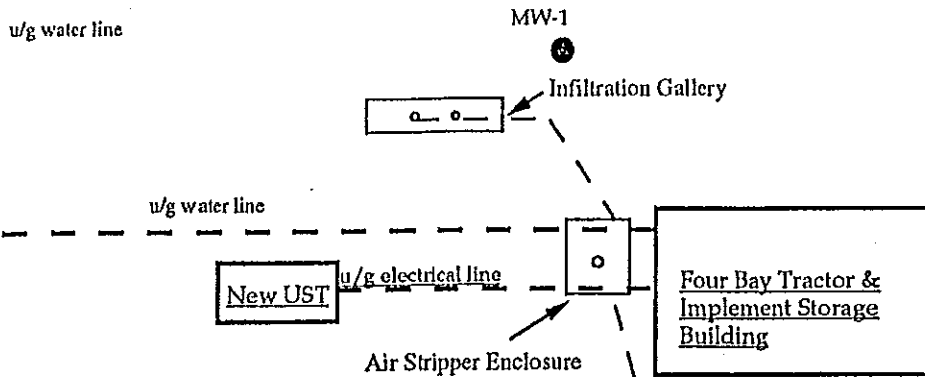
Figure 1. Site Vicinity Map



ERM

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

CRESTVIEW
LANE



RW-1

MW-2

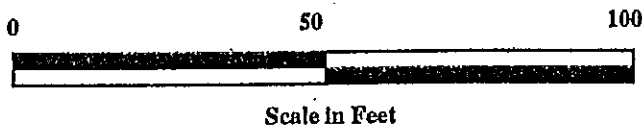
MW-3

MW-4

Equipment and
Storage Building

Office/Shop

MW-5



BIRCHMOUNT ORCHARD FACILITY: Wenatchee, Washington
Groundwater Remediation System Installation Project
By: ERM-Enviroclean Northwest, Inc. February, 1995

Figure 2. Site Plan Map

- = Ground Water Extraction Well
● = Monitoring Well

Note: All locations shown are approximate.



ERM

Environmental Resources Management

Drilling Log

Project Birchmount Orchard Owner Wells & Wade Fruit Co.
 Location Wenatchee, WA Project Number 94009 03
 Boring Number RW-1 Total Depth of ^{Casing} Auger 51.4' ^{Casing} Auger Diameter 12"
 Surface Elevation _____ Water Level: Initial _____ 24-hrs. _____
 Total Depth of Soil Sampler _____ Total Depth of Ground Water Sampler _____
 Ground Water Sample Interval(s) _____
 Drilling Company Holt Drilling Drilling Method Cable Tool
 Driller Larry Log By AMA Date Drilled 8/10-17/94

Sketch Map	4-Bay Garage
Storage Bldg	
Notes	

Depth (Feet)	Graphic Log and USCS and Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
0					
10	ML				0-7.0' Brown sandy SILT, medium stiff, dry to moist, no odor Easy drilling
20	SP				7.0-25.0' Brown-gray medium to coarse SAND, medium dense, gasoline odor below 20 feet Easy drilling Water encountered ~ 24 feet
30	ML				25.0-~41' Brown SILT, trace sand, occasional layers of sandy silt, very stiff, gasoline odor Drilling difficult -
40	BR				~41-51.4 Brown SILTSTONE Drilling difficult
50					Bottom of borehole at 51.4 feet

ENVIRONMENTAL RESOURCES MANAGEMENT ERM-WEST

FIELD WELL COMPLETION FORM

Job Name: Birchmont Orchard Owner: Wells & Wade Fruit Co.
Location: Wenatchee, WA Job #: 94009.03

Logged By: AMA Reviewed By: _____ Project Manager: AMA

Well Number: RW-1 Driller: Holt Drilling

Date of Installation: 8/12-17/94 Hours Drilled: _____

Equipment: Cable Tool
_____ Inch Hollow Stem Auger _____ Inch Rotary Wash

Gallons of Water Used During Drilling: 500 Gallons: _____

Method of Decontamination Prior to Drilling: _____

Well Permit #: _____ Issuing Agency: _____

DEVELOPMENT

Method of Development: 25-gal. steel bailer

Development Began Date: 8/17/94 Time: 1515

Depth to Water Before Development: _____ Feet

Yield: <u><1</u> GPM	Time: From: <u>1515</u> To: <u>1545</u>	Date: <u>8/17/94</u>
Yield: _____ GPM	Time: From: _____ To: _____	Date: _____

Total Water Removed During Development: 80 Gallons

Description of Turbidity at End of Development: ☐ Clear ☐ Mod. Turbid ☒ Slightly cloudy ☐ Very Muddy

Odor of Water: Gasoline odor

Water Discharged To: ☐ Ground Surface ☐ Tank Truck ☐ Storm Sewers ☐ Storage Tank ☒ Drums ☒ Other Soil cuttings on biopack

Depth to Water After Development: _____ Feet Date/Time Well Development Complete: 8/17/95 1545

Well Elevation: _____ Feet Measuring Point (i.e. Top of Casing): _____

MATERIALS USED

3 Sacks of 1020 silica Sand
_____ Sacks of _____ Cement

_____ Gallons of Grout Used
9 Sacks of Powdered Bentonite chips

_____ Pounds of Bentonite Pellets
19.5 Feet of 6 inch Black Steel PVC Blank Casing
31.5 Feet of 6 7/8 inch PVC Slotted Screen stainless steel
_____ Feet of _____ inch Steel Conductor Casing

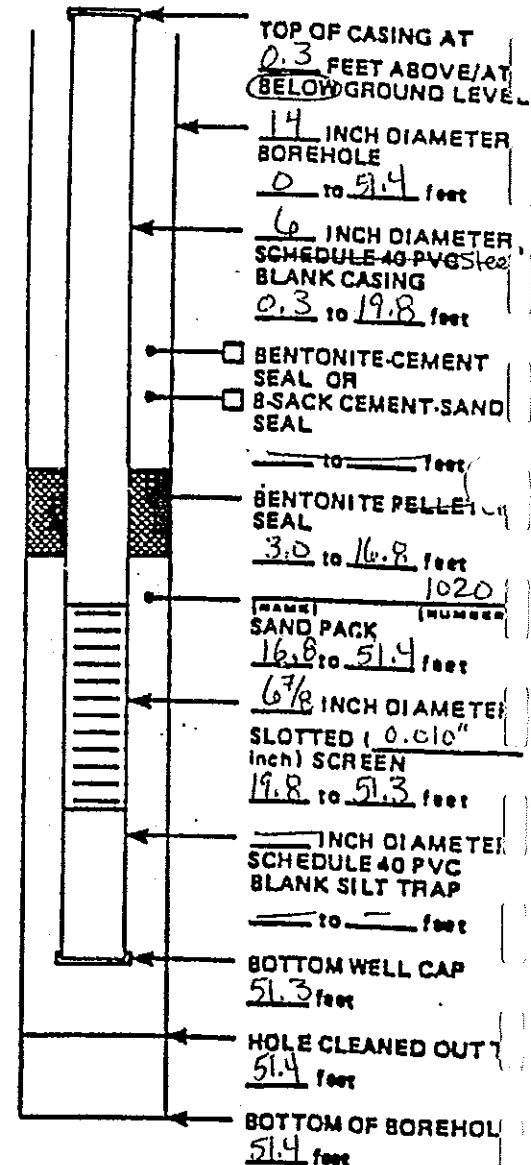
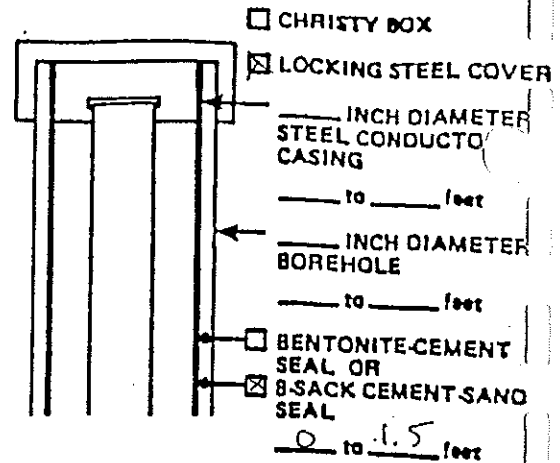
_____ Yard³ Cement-Sand (Redi-Mix) Ordered

_____ Yard³ Cement-Sand (Redi-Mix) Used

Concrete Pumper Used? K No _____ Yes

Name: _____

Well Cover Used: K Locking Steel Cover
_____ Diversified Well Products Box
_____ Christy Box
_____ Other



NOT TO SCALE

ADDITIONAL INFORMATION: _____

ATTACHMENT B

LABORATORY DATA REPORTS

11
(11
11
11
11
11
11
11
(11
11
11
11
11
11
11
(11
11



Seattle 18030 420th Avenue NE, Suite 101, Bothell, WA 98011 9508
425 420 9200 fax 425 420 9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 47, 6
509 924 9200 fax 509 924 9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008 7 13
503 906 9200 fax 503 906 9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5, 11
541 383 9310 fax 541 332 7588

HW
B/2/1/1

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 5/6/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 5/7/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 5/13/99 08:57

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-3	B905160-01	Water	5/6/99

RECEIVED
AUG 24 1999

ERM-WEST, INC. FILED
BELLEVUE, WA

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 4



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9503
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-1776
 509.924.9200 fax 509.924.9299
 Portland 9105 SW Thurston Avenue, Beaverton, OR 97003 7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
 541.333.9310 fax 541.332.7563

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 5/6/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 5/7/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 5/13/99 08:57

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-3				B905160-01			Water	
Gasoline Range Hydrocarbons	0590233	5/10/99	5/10/99		50.0	963	ug/l	
Benzene	"	"	"		14.0	ND	"	1
Toluene	"	"	"		2.40	ND	"	1
Ethylbenzene	"	"	"		2.20	ND	"	1
Xylenes (total)	"	"	"		1.00	13.7	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		133	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		103	"	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 2 of 4



Seattle 18309 170th Avenue NE, Suite 104, Bothell, WA 98011-9593
 425.470.9200 Fax 425.470.9210
 Spokane East Hill 1115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 Fax 509.924.9290
 Portland 9405 SW Hamburg Avenue, Beaverton, OR 97008-7132
 503.906.9200 Fax 503.906.9210
 Bend 20332 Empire Avenue, Suite E, Bend, OR 97701-5711
 541.323.9310 Fax 541.322.7568

ERM-Bellevue 915-118th Avenue S.E., Suite 130 Bellevue, WA 98005	Project: Birchmount Orchard Project Number: 2624.09 Project Manager: Mike Arnold	Sampled: 5/6/99 Received: 5/7/99 Reported: 5/13/99 08:57
--	--	--

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
 North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recovery Limits	Recovery %	RPD Limit	RPD %	Notes*
Batch: 0590233 Date Prepared: 5/10/99 Extraction Method: EPA 5030B (P/T)										
Blank 0590233-BLK1										
Gasoline Range Hydrocarbons	5/10/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		40.0	"	50.0-150	83.3			
Surrogate: 4-BFB (PID)	"	48.0		44.1	"	50.0-150	91.9			
LCS 0590233-BS1										
Gasoline Range Hydrocarbons	5/11/99	500		517	ug/l	70.0-130	103			
Surrogate: 4-BFB (FID)	"	48.0		50.0	"	50.0-150	104			
Duplicate 0590233-DUP1 B905159-04										
Gasoline Range Hydrocarbons	5/11/99		ND	ND	ug/l				25.0	
Surrogate: 4-BFB (FID)	"	48.0		39.2	"	50.0-150	81.7			
Matrix Spike 0590233-MS1 B905159-03										
Benzene	5/11/99	10.0	ND	10.2	ug/l	70.0-130	102			
Toluene	"	10.0	ND	10.7	"	70.0-130	107			
Ethylbenzene	"	10.0	ND	10.7	"	70.0-130	107			
Xylenes (total)	"	30.0	ND	31.0	"	70.0-130	103			
Surrogate: 4-BFB (PID)	"	48.0		46.7	"	50.0-150	97.3			
Matrix Spike Dup 0590233-MSD1 B905159-03										
Benzene	5/11/99	10.0	ND	10.1	ug/l	70.0-130	101	15.0	0.985	
Toluene	"	10.0	ND	10.2	"	70.0-130	102	15.0	4.78	
Ethylbenzene	"	10.0	ND	10.3	"	70.0-130	103	15.0	3.81	
Xylenes (total)	"	30.0	ND	29.5	"	70.0-130	98.3	15.0	4.67	
Surrogate: 4-BFB (PID)	"	48.0		46.6	"	50.0-150	97.1			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 3 of 4



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9503
425.420.9200 Fax 425.420.9210
Spokane 1431 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 Fax 509.924.9200
Portland 9105 SW Hines Avenue, Beaverton, OR 97005 7132
503.906.9200 Fax 503.906.9210
Bend 20332 Empire Avenue, Suite C, Bend, OR 97701 5711
541.383.9310 Fax 541.382.7583

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 5/6/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 5/7/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 5/13/99 08:57

Notes and Definitions

#	Note
---	------

1 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

North Creek Analytical - Bothell

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 4

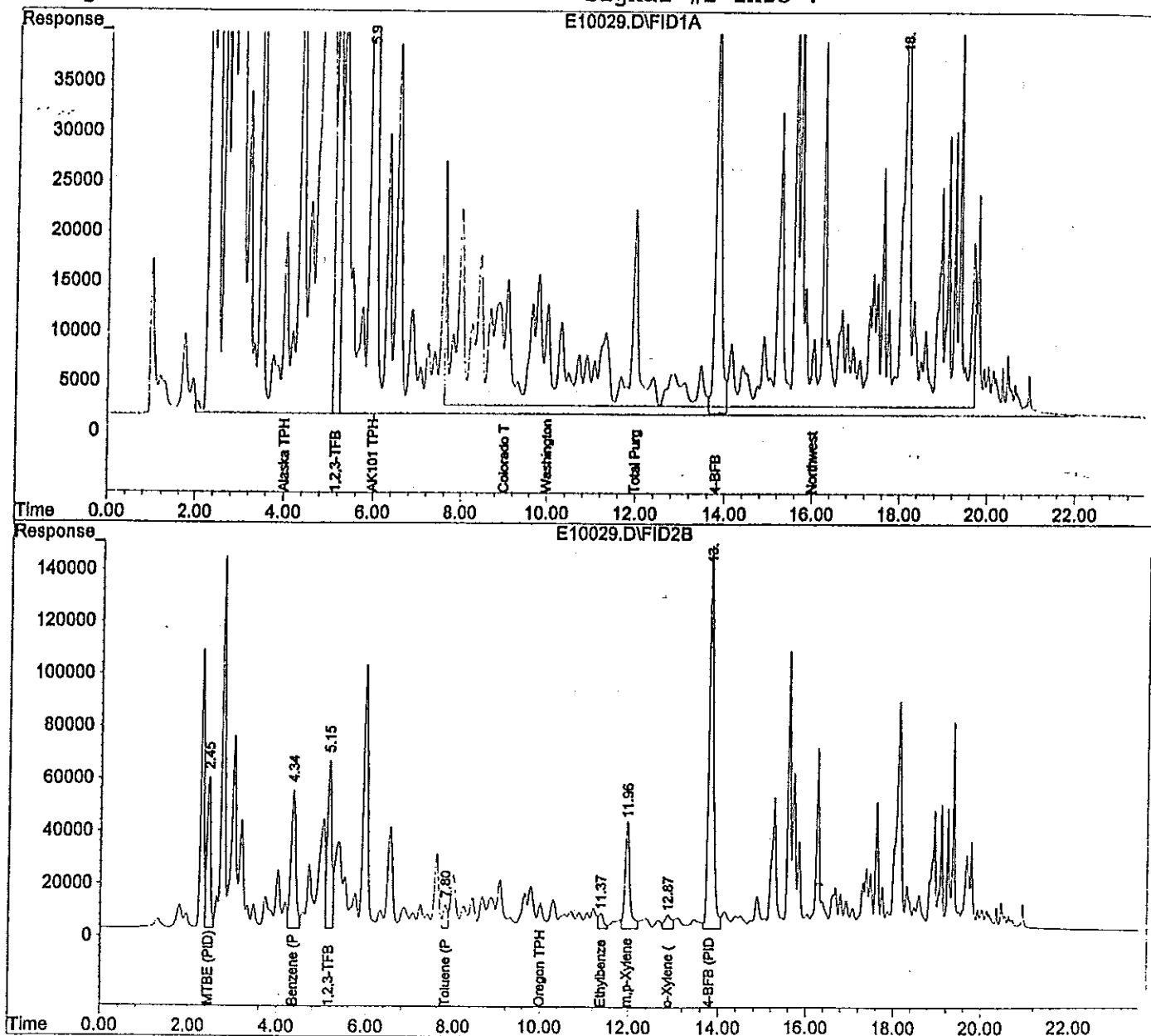
Data File : C:\HPCHEM\1\DATA\051099\E10029.D\FID1A.CH Vial: 29
 Acq On : 10 May 1999 9:52 pm Operator: ys
 Sample : b905160-01 Inst : GC #2
 Misc : 5 ml Multiplr: 1.00
 IntFile : SURR.E

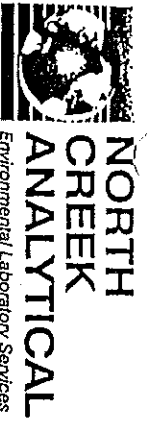
Data File : C:\HPCHEM\1\DATA\051099\E10029.D\FID2B.CH Vial: 29
 Acq On : 10 May 99 9:52 pm Operator: ys
 Sample : b905160-01 Inst : GC #2
 Misc : 5 ml Multiplr: 1.00
 IntFile : SURR2.E

Quant Time: May 12 14:26 1999 Quant Results File: TPHG0299.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHG0299.M (Chemstation Integrator)
 Title : TPH-G Method
 Last Update : Wed May 12 14:25:50 1999
 Response via : Multiple Level Calibration
 DataAcq Meth : TPHG0299.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :





NORTH CREEK ANALYTICAL
Environmental Laboratory Services

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210

CHAIN OF CUSTODY REPORT

Work Order #

B905160

REPORT TO:

INVOICE TO:

TURNAROUND REQUEST in Business Days *

ATTENTION: Mike Arnold ERM

ATTENTION: Accounts Payable ERM

ADDRESS: 915 118th Ave SE Suite 130

ADDRESS: 1777 Batello Drive Suite 2100

Bellevue WA 98005

Walnut Creek CA 94596

PHONE: 425 462 8591 FAX: 425 455 3573

P.O. NUMBER:

NCA QUOTE #:

PROJECT NAME: Birchmount Orchard

Analysis Request:

NCA QUOTE #:

PROJECT NUMBER: 21624.09

Analysis Request:

NCA QUOTE #:

SAMPLED BY: Dave Thornsbury

Analysis Request:

NCA QUOTE #:

CLIENT SAMPLE IDENTIFICATION

SAMPLING DATE/TIME

NCA SAMPLE ID (Laboratory Use Only)

MATRIX (W, S, A, O)

OF CONTAINERS

COMMENTS

1. MW-3

5-6-99/0957

W

3

B905160-01

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

23.

24.

25.

26.

27.

28.

29.

30.

31.

32.

33.

34.

35.

36.

37.

38.

39.

40.

41.

42.

43.

44.

45.

46.

47.

48.

49.

50.

51.

52.

53.

54.

55.

56.

57.

58.

59.

60.

61.

62.

63.

64.

65.

66.

67.

68.

69.

70.

71.

72.

73.

74.

75.

76.

77.

78.

79.

80.

81.

82.

83.

84.

85.

86.

87.

88.

89.

90.

91.

92.

93.

94.

95.

96.

97.

98.

99.

100.

101.

102.

103.

104.

105.

106.

107.

108.

109.

110.

111.

112.

113.

114.

115.

116.

117.

118.

119.

120.

121.

122.

123.

124.

125.

126.

127.

128.

129.

130.

131.

132.

133.

134.

135.

136.

137.

138.

139.

140.

141.

142.

143.

144.

145.

146.

147.

148.

149.

150.

151.

152.

153.

154.

155.

156.

157.

158.

159.

160.

161.

162.

163.

164.

165.

166.

167.

168.

169.

170.

171.

172.

173.

174.

175.

176.

177.

178.

179.

180.

181.

182.

183.

184.

185.

186.

187.

188.

189.

190.

191.

192.

193.

194.

195.

196.

197.

198.

199.

200.

201.

202.

203.

204.

205.

206.

207.

208.

209.

210.

211.

212.

213.

214.

215.

216.

217.

218.

219.

220.

221.

222.

223.

224.

225.

226.

227.

228.

229.

230.

231.

232.

233.

234.

235.

236.

237.

238.

239.

240.

241.

242.

243.

244.

245.

246.

247.

248.

249.

250.

251.

252.

253.

254.

255.

256.

257.

258.

259.

260.

261.

262.

263.

264.

265.

266.

267.

268.

269.

270.

271.

272.

273.

274.

275.

276.

277.

278.

279.

280.

281.

282.

283.

284.

285.

286.



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9503
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite 8, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

AMS
8/24/99

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 8/10/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 8/11/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 8/18/99 15:40

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-3	B908213-01	Water	8/10/99



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9908
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Hinckley Avenue, Beaverton, OR 97008 7432
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite C-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7588

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 8/10/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 8/11/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 8/18/99 15:40

**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-3				B908213-01			Water	
Gasoline Range Hydrocarbons	0890447	8/12/99	8/14/99		50.0	1030	ug/l	
Benzene	"	"	"		5.22	ND	"	1
Toluene	"	"	"		1.20	ND	"	1
Ethylbenzene	"	"	"		1.12	ND	"	1
Xylenes (total)	"	"	"		1.00	7.60	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		121	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		58.8	"	



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9105 SW Hummer Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Lupine Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7533

ERM-Bellevue 915-118th Avenue S.E., Suite 130 Bellevue, WA 98005	Project: Birchmount Orchard Project Number: 2624.09 Project Manager: Mike Arnold	Sampled: 8/10/99 Received: 8/11/99 Reported: 8/18/99 15:40
--	--	--

**BTEX Confirmation by EPA Method 8260B
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-3				B908213-01			Water	
Benzene	0890628	8/17/99	8/17/99		1.00	ND	ug/l	
Toluene	"	"	"		1.00	ND	"	
Ethylbenzene	"	"	"		1.00	ND	"	
Xylenes (total)	"	"	"		2.00	10.1	"	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		104	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		98.5	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		97.5	"	
Surrogate: 4-BFB	"	"	"	80.0-120		86.5	"	



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9200
Portland 9405 SW Honulus Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7508

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 8/10/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 8/11/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 8/18/99 15:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<u>Batch: 0890447</u>		<u>Date Prepared: 8/12/99</u>		<u>Extraction Method: EPA 5030B (P/T)</u>						
<u>Blank</u>		<u>0890447-BLK1</u>								
Gasoline Range Hydrocarbons	8/12/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		39.2	"	50.0-150	81.7			
Surrogate: 4-BFB (PID)	"	48.0		44.8	"	50.0-150	93.3			
<u>Blank</u>		<u>0890447-BLK2</u>								
Gasoline Range Hydrocarbons	8/13/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		40.2	"	50.0-150	83.8			
Surrogate: 4-BFB (PID)	"	48.0		45.1	"	50.0-150	94.0			
<u>Blank</u>		<u>0890447-BLK3</u>								
Gasoline Range Hydrocarbons	8/14/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		40.4	"	50.0-150	84.2			
Surrogate: 4-BFB (PID)	"	48.0		45.0	"	50.0-150	93.8			
<u>LCS</u>		<u>0890447-BS1</u>								
Gasoline Range Hydrocarbons	8/12/99	500		495	ug/l	70.0-130	99.0			
Surrogate: 4-BFB (FID)	"	48.0		42.3	"	50.0-150	88.1			
<u>Duplicate</u>		<u>0890447-DUP1</u>		<u>B908181-01</u>						
Gasoline Range Hydrocarbons	8/13/99		10300	11200	ug/l			25.0	8.37	
Surrogate: 4-BFB (FID)	"	48.0		42.4	"	50.0-150	88.3			
<u>Duplicate</u>		<u>0890447-DUP2</u>		<u>B908224-01</u>						
Gasoline Range Hydrocarbons	8/14/99		ND	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	48.0		42.3	"	50.0-150	88.1			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite D, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Harbor Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7588

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 8/10/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 8/11/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 8/18/99 15:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike		0890447-MS1	B908202-02							
Benzene	8/16/99	10.0	2.45	11.1	ug/l	70.0-130	86.5			
Toluene	"	10.0	ND	8.79	"	70.0-130	87.9			
Ethylbenzene	"	10.0	ND	9.25	"	70.0-130	92.5			
Xylenes (total)	"	30.0	ND	27.6	"	70.0-130	92.0			
Surrogate: 4-BFB (PID)	"	48.0		45.5	"	50.0-150	94.8			
Matrix Spike Dup		0890447-MSD1	B908202-02							
Benzene	8/17/99	10.0	2.45	11.9	ug/l	70.0-130	94.5	15.0	8.84	
Toluene	"	10.0	ND	9.57	"	70.0-130	95.7	15.0	8.50	
Ethylbenzene	"	10.0	ND	10.2	"	70.0-130	102	15.0	9.77	
Xylenes (total)	"	30.0	ND	29.9	"	70.0-130	99.7	15.0	8.03	
Surrogate: 4-BFB (PID)	"	48.0		48.1	"	50.0-150	100			



Seattle 18939 170th Avenue BL, Suite 101, Bothell, WA 98011-9508
425-420-9200 fax 425-420-9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509-924-9200 fax 509-924-9290
Portland 9405 SW Hamilton Avenue, Beaverton, OR 97008-7132
503-908-9200 fax 503-906-9210
Bend 20332 Empire Avenue, Suite J-1, Bend, OR 97701-5711
541-383-9310 fax 541-382-7583

ERM-Bellevue	Project: Birchmount Orchard	Sampled: 8/10/99
915-118th Avenue S.E., Suite 130	Project Number: 2624.09	Received: 8/11/99
Bellevue, WA 98005	Project Manager: Mike Arnold	Reported: 8/18/99 15:40

BTEX Confirmation by EPA Method 8260B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0890628		Date Prepared: 8/17/99		Extraction Method: EPA 5030B [P/T]						
Blank		0890628-BLK1								
Benzene	8/17/99			ND	ug/l	1.00				
Toluene	"			ND	"	1.00				
Ethylbenzene	"			ND	"	1.00				
Xylenes (total)	"			ND	"	2.00				
Surrogate: 2-Bromopropene	"	20.0		22.5	"	80.0-120	113			
Surrogate: 1,2-DCA-d4	"	20.0		18.8	"	80.0-120	94.0			
Surrogate: Toluene-d8	"	20.0		19.3	"	80.0-120	96.5			
Surrogate: 4-BFB	"	20.0		19.7	"	80.0-120	98.5			



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9503
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.506.9200 fax 503.506.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9340 fax 541.382.7500

ERM-Bellevue 915-118th Avenue S.E., Suite 130 Bellevue, WA 98005	Project: Birchmount Orchard Project Number: 2624.09 Project Manager: Mike Arnold	Sampled: 8/10/99 Received: 8/11/99 Reported: 8/18/99 15:40
--	--	--

Notes and Definitions

#	Note
1	The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RD	Relative Percent Difference

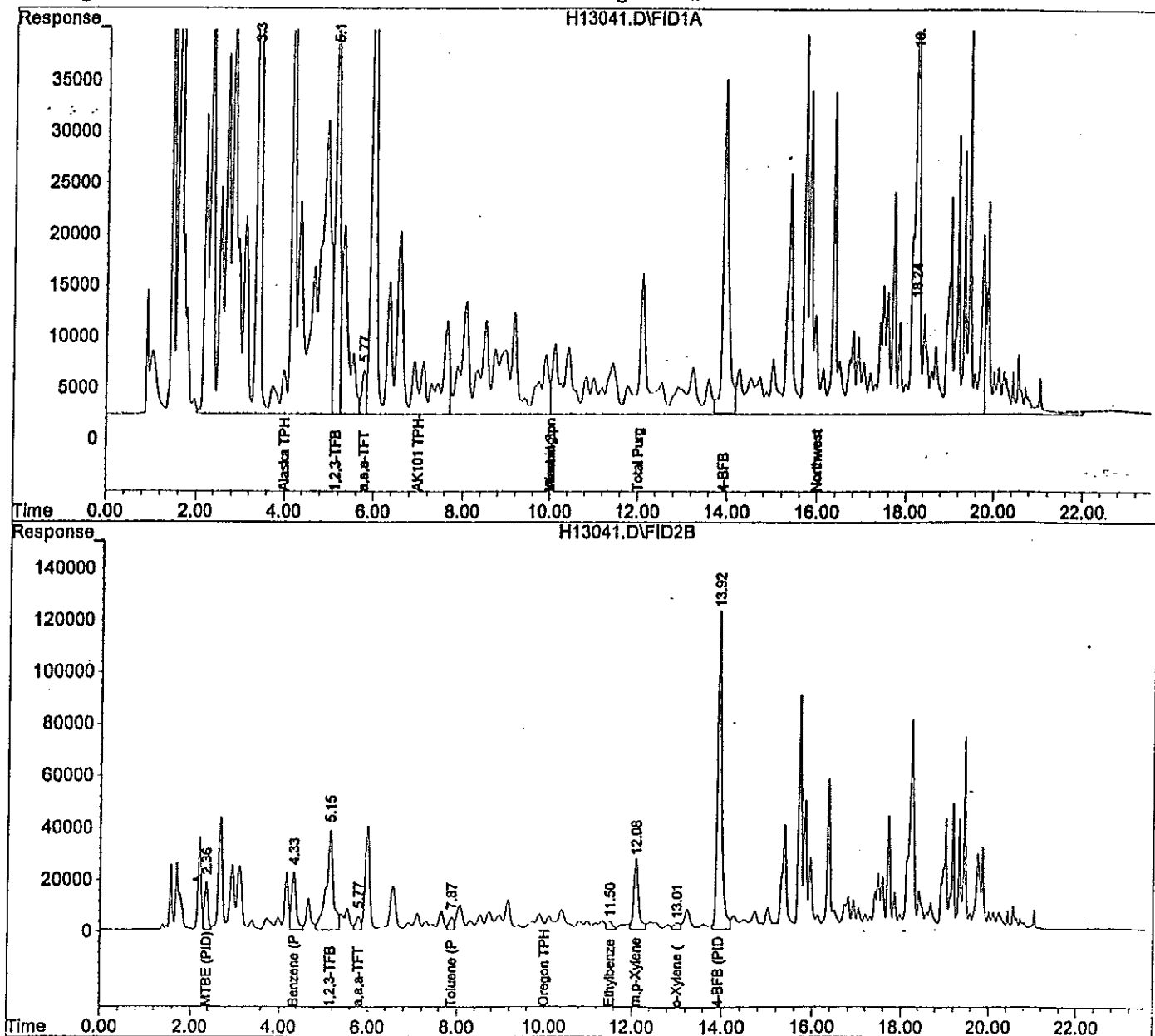
Data File : C:\HPCHEM\4\DATA\081399\H13041.D\FID1A.CH Vial: 41
 Acq On : 14 Aug 1999 3:36 am Operator: sa
 Sample : b908213-01 r1 Inst : GC #8
 Misc : 5 ml Multiplr: 1.00
 IntFile : TPH.E

Data File : C:\HPCHEM\4\DATA\081399\H13041.D\FID2B.CH Vial: 41
 Acq On : 14 Aug 99 3:36 am Operator: sa
 Sample : b908213-01 r1 Inst : GC #8
 Misc : 5 ml Multiplr: 1.00
 IntFile : SURR2.E

Quant Time: Aug 14 6:43 1999 Quant Results File: TPHG0499.RES

Quant Method : C:\HPCHEM\4\METHODS\TPHG0499.M (Chemstation Integrator)
 Title : TPH-G Water Method
 Last Update : Mon Aug 09 13:56:30 1999
 Response via : Multiple Level Calibration
 DataAcq Meth : TPHG0499.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :





Environmental Laboratory Services

18959 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

(425) 420-9200	FAX +20-9210
(509) 924-9200	FAX 924-9290
(503) 906-9200	FAX 906-9210

CHAIN OF CUSTODY REPORT

Work Order

REPORT TO:		INVOICE TO:			
ATTENTION: Mike Arnold ERM		ATTENTION: Accounts Payable ERM			
ADDRESS: 915 118th Avenue SE Suite 130		ADDRESS: 1777 Botello Drive Suite 260			
Bellevue WA 98004		Walnut Creek CA 94596			
PHONE: 425 4628591 FAX: 425 455 3573		P.O. NUMBER: 2624.09 NCA QUOTE #:			
PROJECT NAME: Birchmount Orchard		Analysis Request:		MATTER-6/15/09	
PROJECT NUMBER: 21024.09					
SAMPLED BY: Eve Thornberry					
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		NCA SAMPLE ID (Laboratory Use Only)	
1. MW-3		8/10/09 0940		2918213-01	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
RELINQUISHED BY (Signature):		DATE: 08/10/09		RECEIVED BY (Signature):	
PRINT NAME: Dave Thomsberry		TIME: 10:04		DATE: 8/11/09	
RELINQUISHED BY (Signature):		DATE:		FIRM: AIT	
PRINT NAME:		TIME:		TIME: 0900	
RELINQUISHED BY (Signature):		DATE:		DATE:	
PRINT NAME:		TIME:		TIME:	
ADDITIONAL REMARKS:					

THIS PAGE INTENTIONALLY LEFT BLANK

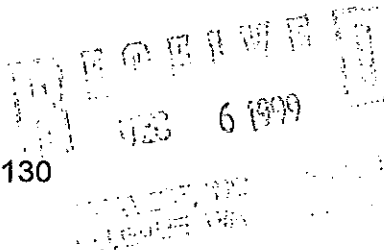


Seattle 18239 120th Avenue NE, Suite 101, Redmond, WA 98011 9503
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.921.9200 fax 509.921.9230
Portland 9105 SW Hines Avenue, Beaverton, OR 97003 7132
503.906.9200 fax 503.906.9210
Rend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7533

AMT
12/9/99
2624.09

23 November, 1999

Mike Arnold
ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue, WA 98005



RE: Birchmount Orchard

Enclosed are the results of analyses for samples received by the laboratory on 11/19/99 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kirk Gendron
Project Manager



Seattle 18939 120th Avenue NE, Suite 101 Bothell, WA 98011-9508
425.420.9200 Fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 1776
509.923.9200 Fax 509.923.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 Fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 Fax 541.382.7583

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

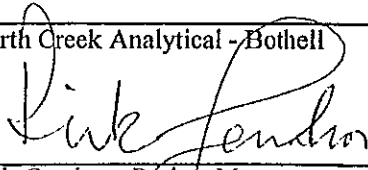
Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
11/23/99 09:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	B9K0383-01	Water	11/18/99 10:15	11/19/99 09:30

North Creek Analytical - Bothell


Kirk Gendron, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.



Seattle 18909 129th Avenue NE, Suite 101, Bothell, WA 98011 9503
425.420.9200 fax 425.420.9210
Spokane 1381 11115 Montanway, Suite B, Spokane, WA 99208-4776
509.924.9200 fax 509.924.9200
Portland 9185 SW Harbor Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite E-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue

915-118th Avenue S.E., Suite 130

Bellevue WA, 98005

Project: Birchmount Orchard

Project Number: 2624.09

Project Manager: Mike Arnold

Reported:

11/23/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B9K0383-01) Water Sampled: 11/18/99 10:15 Received: 11/19/99 09:30									
Gasoline Range Hydrocarbons	1980	50.0	ug/l	1	9K18014	11/19/99	11/19/99	NWTPH-Gx/80	
Benzene	ND	16.6	"	"	"	"	"	2fB	R-03
Toluene	ND	2.90	"	"	"	"	"	"	R-03
Ethylbenzene	ND	3.40	"	"	"	"	"	"	R-03
Xylenes (total)	14.8	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)		181 %	50-150	"	"	"	"	"	S-02
Surrogate: 4-BFB (PID)		118 %	50-150	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 5



Seattle 13939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-1776
509.924.9200 fax 509.924.9290
Portland 9105 SW Minibus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7593

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
11/23/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K18014: Prepared 11/18/99 Using EPA 5030B (P/T)										
Blank (9K18014-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	36.9		"	48.0		76.9	50-150			
Surrogate: 4-BFB (PID)	41.6		"	48.0		86.7	50-150			
Blank (9K18014-BLK2)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	40.6		"	48.0		84.6	50-150			
Surrogate: 4-BFB (PID)	41.6		"	48.0		86.7	50-150			
LCS (9K18014-BS1)										
Gasoline Range Hydrocarbons	471	50.0	ug/l	500		94.2	70-130			
Surrogate: 4-BFB (FID)	48.7		"	48.0		101	50-150			
Duplicate (9K18014-DUP1) Source: B9K0403-01										
Gasoline Range Hydrocarbons	408	250	ug/l		369			10.0	25	
Surrogate: 4-BFB (FID)	40.3		"	48.0		84.0	50-150			
Duplicate (9K18014-DUP2) Source: B9K0358-10										
Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND				25	
Surrogate: 4-BFB (FID)	45.6		"	48.0		95.0	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 5



Seattle 6333 120th Avenue NE, Suite 101, Bothell, WA 98011-9503
425-420-9200 Fax 425-420-9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99208-4776
509-924-9200 Fax 509-924-9290
Portland 9105 NW Rindus Avenue, Beaverton, OR 97003-7132
503-906-9200 Fax 503-906-9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541-333-9110 Fax 541-382-7538

ERM-Bellevue

915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard

Project Number: 2624.09

Project Manager: Mike Arnold

Reported:

11/23/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	--------------	----------------	-----	--------------	-------

Batch 9K18014: Prepared 11/18/99 Using EPA 5030B (P/T)

Matrix Spike (9K18014-MS1)

Source: B9K0358-09

Benzene	10.1	0.500	ug/l	10.0	0.151	99.5	70-130			
Toluene	10.7	0.500	"	10.0	0.483	102	70-130			
Ethylbenzene	10.4	0.500	"	10.0	ND	104	70-130			
Xylenes (total)	30.2	1.00	"	30.0	0.342	99.5	70-130			
Surrogate: 4-BFB (PID)	49.1		"	48.0		102	50-150			

Matrix Spike Dup (9K18014-MSD1)

Source: B9K0358-09

Benzene	10.2	0.500	ug/l	10.0	0.151	100	70-130	0.985	15	
Toluene	10.6	0.500	"	10.0	0.483	101	70-130	0.939	15	
Ethylbenzene	10.4	0.500	"	10.0	ND	104	70-130	0	15	
Xylenes (total)	30.3	1.00	"	30.0	0.342	99.9	70-130	0.331	15	
Surrogate: 4-BFB (PID)	48.6		"	48.0		101	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 5



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9503
425.420.9280 fax 425.420.9210
Spokane East 11115 Montgoomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9403 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.996.9200 fax 503.996.9310
Bend 20332 Empire Avenue, Suite F-1 Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
11/23/99 09:57

Notes and Definitions

- R-03 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

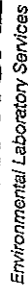
North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 5



(425) 420-9200 FAX 906-9210
(509) 924-9200 FAX 924-9290
(503) 906-9200 FAX 906-9210

Work Order

CIVIC Rev 8.1 AM

THIS PAGE INTENTIONALLY LEFT BLANK



FWW+ 2624 07
Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9503
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4726
509.924.9200 fax 509.924.9200
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite 1-1, Bend, OR 97701 5411
541.383.9310 fax 541.382.7553

2 December, 1999

Mike Arnold
ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue, WA 98005

RE: Birchmount Orchard

Enclosed are the results of analyses for samples received by the laboratory on 11/19/99 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kirk Gendron
Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9500
425.470.9200 fax 425.470.9210
Spokane East 11115 Montpierre, Suite B, Spokane, WA 99206-1776
509.924.9200 fax 509.924.9290
Portland 9405 SW Main Street, Beaverton, OR 97005-7132
503.906.9200 fax 503.906.3210
Bend 20332 Chaparral Avenue, Suite E-1, Bend, OR 97701-3514
541.383.9310 fax 541.382.7583

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
12/02/99 09:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	B9K0383-01	Water	11/18/99 10:15	11/19/99 09:30

North Creek Analytical - Bothell

Kirk Gendron, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 7



Seattle 13939 170th Avenue NE, Suite 101, Bothell, WA 98011 8505
425-490-9200 fax 425-490-9210
Spokane 1331 11115 Montquarry, Suite B, Spokane, WA 99206-4765
509-921-9200 fax 509-924-9290
Portland 9405 SW Humboldt Avenue, Beaverton, OR 97005-7132
503-906-9200 fax 503-906-9210
Bend 20332 Lupine Avenue, Suite 1-1, Bend, OR 97701 5711
541-393-9310 fax 541-392-7588

ERM-Bellevue

915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard

Project Number: 2624.09

Project Manager: Mike Arnold

Reported:

12/02/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B9K0383-01) Water Sampled: 11/18/99 10:15 Received: 11/19/99 09:30									
Gasoline Range Hydrocarbons	1980	50.0	ug/l	1	9K18014	11/19/99	11/19/99	NWTPH-Gx/80	
Benzene	ND	16.6	"	"	"	"	"	21B	R-03
Toluene	ND	2.90	"	"	"	"	"	"	R-03
Ethylbenzene	ND	3.40	"	"	"	"	"	"	R-03
Xylenes (total)	14.8	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)		181 %	50-150		"	"	"	"	S-02
Surrogate: 4-BFB (PID)		118 %	50-150		"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 7



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9503
425.420.9200 Fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.921-9200 Fax 509.921-9290
Portland 9405 SW Haddam Avenue, Beaverton, OR 97008-7132
503.906.9200 Fax 503.906.9210
Gend 20332 Empire Avenue, Suite 1-1, Bend, OR 97701-5711
541.383.9310 Fax 541.382.7568

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
12/02/99 09:57

BTEX Confirmation by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B9K0383-01) Water Sampled: 11/18/99 10:15 Received: 11/19/99 09:30									
Benzene	ND	1.00	ug/l	1	9K24006	11/23/99	11/23/99	EPA 8260B	
Surrogate: 2-Bromopropene		119 %	80-120		"	"	"	"	
Surrogate: 1,2-DCA-d4		104 %	80-120		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	80-120		"	"	"	"	
Surrogate: 4-BFB		77.0 %	80-120		"	"	"	"	S-03

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 7



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011 9308
 P25, E20, 9200 Fax 425-420-9210
 Spokane East 11115 Montpauze, Suite B, Spokane, WA 99206 4776
 509.321.9200 Fax 509.321.9200
 Portland 9105 SW Harbor Avenue, Beaverton, OR 97004 4132
 503.906.9200 Fax 503.906.9210
 Bend 20332 Empire Avenue, Suite 1-1, Bend, OR 97701 5734
 541.383.9310 Fax 541.382.7588

ERM-Bellevue
 915-118th Avenue S.E., Suite 130
 Bellevue WA, 98005

Project: Birchmount Orchard
 Project Number: 2624.09
 Project Manager: Mike Arnold

Reported:
 12/02/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 9K18014: Prepared 11/18/99 Using EPA 5030B (P/T)

Blank (9K18014-BLK1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	36.9		"	48.0		76.9	50-150			
Surrogate: 4-BFB (PID)	41.6		"	48.0		86.7	50-150			

Blank (9K18014-BLK2)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	40.6		"	48.0		84.6	50-150			
Surrogate: 4-BFB (PID)	41.6		"	48.0		86.7	50-150			

LCS (9K18014-BS1)

Gasoline Range Hydrocarbons	471	50.0	ug/l	500		94.2	70-130			
Surrogate: 4-BFB (FID)	48.7		"	48.0		101	50-150			

Duplicate (9K18014-DUP1)

Source: B9K0403-01

Gasoline Range Hydrocarbons	408	250	ug/l		369			10.0	25	
Surrogate: 4-BFB (FID)	40.3		"	48.0		84.0	50-150			

Duplicate (9K18014-DUP2)

Source: B9K0358-10

Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND				25	
Surrogate: 4-BFB (FID)	45.6		"	48.0		95.0	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 4 of 7



Seattle 13939 129th Avenue NE, Suite 101, Bothell, WA 98011 9503
425-420-9200 Fax 425-420-9210
Spokane 14115 Montquary, Suite B, Spokane, WA 99206 476
509-921-3200 Fax 509-921-9290
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97008-7122
503-906-9200 Fax 503-906-9210
Bend 20332 Empire Avenue, Suite E-1, Bend, OR 97701 5711
541-383-9310 Fax 541-382-7589

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
12/02/99 09:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9K18014: Prepared 11/18/99 Using EPA 5030B (P/T)										
Matrix Spike (9K18014-MS1)					Source: B9K0358-09					
Benzene	10.1	0.500	ug/l	10.0	0.151	99.5	70-130			
Toluene	10.7	0.500	"	10.0	0.483	102	70-130			
Ethylbenzene	10.4	0.500	"	10.0	ND	104	70-130			
Xylenes (total)	30.2	1.00	"	30.0	0.342	99.5	70-130			
Surrogate: 4-BFB (PID)	49.1		"	48.0		102	50-150			
Matrix Spike Dup (9K18014-MSD1)					Source: B9K0358-09					
Benzene	10.2	0.500	ug/l	10.0	0.151	100	70-130	0.985	15	
Toluene	10.6	0.500	"	10.0	0.483	101	70-130	0.939	15	
Ethylbenzene	10.4	0.500	"	10.0	ND	104	70-130	0	15	
Xylenes (total)	30.3	1.00	"	30.0	0.342	99.9	70-130	0.331	15	
Surrogate: 4-BFB (PID)	48.6		"	48.0		101	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 7



Seattle 13939 120th Avenue NE, Suite 101 Bothell, WA 98011 9503
425.420.9200 Fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4746
509.921.9200 Fax 509.921.9290
Portland 9105 SW 16th Avenue, Beaverton, OR 97003 7122
503.906.9200 Fax 503.906.9210
Bend 20332 Empire Avenue, Suite 1-1, Bend, OR 97701 7711
541.383.9310 Fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
12/02/99 09:57

BTEX Confirmation by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 9K24006: Prepared 11/23/99 Using EPA 5030B [P/T]

Blank (9K24006-BLK1)

Benzene	ND	1.00	ug/l							
Surrogate: 2-Bromopropene	28.1		"	20.0		141	80-120			Q-01
Surrogate: 1,2-DCA-d4	20.4		"	20.0		102	80-120			
Surrogate: Toluene-d8	18.3		"	20.0		91.5	80-120			
Surrogate: 4-BFB	17.5		"	20.0		87.5	80-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 6 of 7



Seattle 13939 120th Avenue NE, Suite 101, Bothell, WA 98011 9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montquinnery, Suite B, Spokane, WA 99206 4773
509.924.9200 fax 509.924.9290
Portland 9405 SW Rhombus Avenue, Beaverton, OR 97008 7132
503.966.9260 fax 503.966.9210
Bend 20332 Empire Avenue, Suite 111, Bend, OR 97701 5744
541.383.9310 fax 541.362.7583

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.09
Project Manager: Mike Arnold

Reported:
12/02/99 09:57

Notes and Definitions

- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- R-03 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- S-03 The surrogate recovery for this sample is outside of established control limits. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 7 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9299
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97009 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

AWA
1/8/01

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

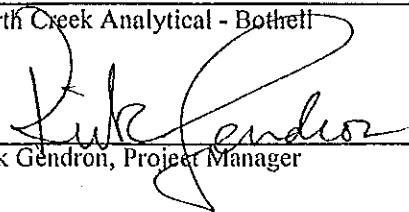
Reported:
01/05/01 07:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-1	B0L0621-01	Water	12/21/00 14:00	12/27/00 15:00
MW-3	B0L0621-02	Water	12/21/00 14:05	12/27/00 15:00

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.


Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (B0L0621-01) Water Sampled: 12/21/00 14:00 Received: 12/27/00 15:00									
Gasoline Range Hydrocarbons	1090	50.0	ug/l	1	0L29003	12/29/00	12/29/00	NWTPH-Gx/8021B	
Benzene	59.7	0.500	"	"	"	"	"	"	
Toluene	2.28	0.500	"	"	"	"	"	"	
Ethylbenzene	7.97	0.500	"	"	"	"	"	"	
Xylenes (total)	28.5	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	105 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	84.0 %	50-150			"	"	"	"	
MW-3 (B0L0621-02) Water Sampled: 12/21/00 14:05 Received: 12/27/00 15:00									
Gasoline Range Hydrocarbons	1430	50.0	ug/l	1	0L29003	12/29/00	12/29/00	NWTPH-Gx/8021B	
Benzene	ND	2.00	"	"	"	"	"	"	R-03
Toluene	ND	0.722	"	"	"	"	"	"	R-03
Ethylbenzene	ND	2.16	"	"	"	"	"	"	R-03
Xylenes (total)	13.8	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	111 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	89.2 %	50-150			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7583

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

BTEX Confirmation by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (B0L0621-01) Water Sampled: 12/21/00 14:00 Received: 12/27/00 15:00									
Benzene	91.4	1.00	ug/l	1	1A03033	01/03/01	01/03/01	EPA 8260B	
Toluene	3.07	1.00	"	"	"	"	"	"	
Ethylbenzene	6.76	1.00	"	"	"	"	"	"	
Xylenes (total)	37.1	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	106 %	60-130			"	"	"	"	
Surrogate: Toluene-d8	86.3 %	80-120			"	"	"	"	
Surrogate: 4-BFB	94.5 %	80-120			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7580

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 0L29003: Prepared 12/29/00 Using EPA 5030B (P/T)

Blank (0L29003-BLK1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	47.2		"	48.0		98.3	50-150			
Surrogate: 4-BFB (PID)	44.7		"	48.0		93.1	50-150			

Blank (0L29003-BLK2)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	46.8		"	48.0		97.5	50-150			
Surrogate: 4-BFB (PID)	43.9		"	48.0		91.5	50-150			

LCS (0L29003-BS1)

Gasoline Range Hydrocarbons	459	50.0	ug/l	500		91.8	70-130			
Surrogate: 4-BFB (FID)	46.2		"	48.0		96.3	50-150			

LCS (0L29003-BS2)

Gasoline Range Hydrocarbons	447	50.0	ug/l	500		89.4	70-130			
Surrogate: 4-BFB (FID)	46.6		"	48.0		97.1	50-150			

Duplicate (0L29003-DUP1)

Source: B0L0622-08

Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND			49.5	25	Q-05
Surrogate: 4-BFB (FID)	47.8		"	48.0		99.6	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gehron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.966.9200 fax 503.966.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 0L29003: Prepared 12/29/00 Using EPA 5030B (P/T)

Duplicate (0L29003-DUP2)

Source: B0L0648-03

Gasoline Range Hydrocarbons	3540	50.0	ug/l		3690			4.15	25	
Surrogate: 4-BFB (FID)	46.5		"	48.0		96.9	50-150			

Matrix Spike (0L29003-MS1)

Source: B0L0622-06

Benzene	8.96	0.500	ug/l	10.0	ND	88.6	70-130			
Toluene	9.04	0.500	"	10.0	ND	88.3	70-130			
Ethylbenzene	9.43	0.500	"	10.0	ND	94.3	70-130			
Xylenes (total)	27.6	1.00	"	30.0	ND	91.2	70-130			
Surrogate: 4-BFB (PID)	44.7		"	48.0		93.1	50-150			

Matrix Spike Dup (0L29003-MSD1)

Source: B0L0622-06

Benzene	9.19	0.500	ug/l	10.0	ND	90.9	70-130	2.53	15	
Toluene	9.24	0.500	"	10.0	ND	90.3	70-130	2.19	15	
Ethylbenzene	9.69	0.500	"	10.0	ND	96.9	70-130	2.72	15	
Xylenes (total)	28.6	1.00	"	30.0	ND	94.5	70-130	3.56	15	
Surrogate: 4-BFB (PID)	45.0		"	48.0		93.8	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20312 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7583

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

BTEX Confirmation by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 1A03033: Prepared 01/03/01 Using EPA 5030B [P/T]

Blank (1A03033-BLK1)

Benzene	ND	1.00	ug/l							
Toluene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Xylenes (total)	ND	2.00	"							

Surrogate: 1,2-DCA-d4	41.4		"	40.2		103	60-130			
Surrogate: Toluene-d8	35.0		"	40.2		87.1	80-120			
Surrogate: 4-BFB	36.5		"	40.2		90.8	80-120			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain
custody document. This analytical report must be reproduced in its entirety.*

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 6 of 7



Seattle 11720 North Creek Pkwy N, Suite 300, Bothell, WA 98011-2792
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-1745
509.924.9200 fax 509.924.9799
Portland 9405 SW Harbor Avenue, Beaverton, OR 97008-7137
503.906.9200 fax 503.906.9210
Bend 20337 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.333.9310 fax 541.342.7593

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
01/05/01 07:15

Notes and Definitions

- Q-05 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
- R-03 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 7 of 7

THIS PAGE INTENTIONALLY LEFT BLANK



ncaTM
www.ncalabs.com

RECEIVED
MAY 03 2001

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 8241
425 420.9200 Fax 425 420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 Fax 509.924.9290
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97005 7132
503.906.9200 Fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 Fax 541.382.7588

Amst
5/4/01

ERM-WEST, INC.
BELLEVUE, WA

FILE#

ERM-Bellevue

915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard

Project Number: 2624.20

Project Manager: Mike Arnold

Reported:

05/01/01 14:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	B1D0230-01	Water	04/10/01 11:30	04/10/01 16:15
RW-1	B1D0230-02	Water	04/10/01 12:05	04/10/01 16:15

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 7



Seattle 11720 North Central Pkwy N, Suite 400, Bothell, WA 98011 4244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9210
Portland 9305 SW Nicholas Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F 1, Bend, OR 97701 5711
541.383.9319 fax 541.382.7593

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/01/01 14:42

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B1D0230-01) Water Sampled: 04/10/01 11:30 Received: 04/10/01 16:15									
Gasoline Range Hydrocarbons	2230	100	ug/l	2	1D11043	04/11/01	04/12/01	NWTPH-Gx/8021B	
Benzene	20.9	1.00	"	"	"	"	"	"	I-06
Toluene	4.98	1.00	"	"	"	"	"	"	I-06
Ethylbenzene	6.17	1.00	"	"	"	"	"	"	I-06
Xylenes (total)	29.5	2.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	157 %	50-150			"	"	"	"	S-04
Surrogate: 4-BFB (PID)	127 %	50-150			"	"	"	"	
RW-1 (B1D0230-02) Water Sampled: 04/10/01 12:05 Received: 04/10/01 16:15									
Gasoline Range Hydrocarbons	733	250	ug/l	5	1D11043	04/11/01	04/12/01	NWTPH-Gx/8021B	
Benzene	177	2.50	"	"	"	"	"	"	
Toluene	ND	2.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.50	"	"	"	"	"	"	
Xylenes (total)	16.4	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	94.6 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	109 %	50-150			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 7



Seattle 11720 North Creek Plwy N, Suite 400, Bothell, WA 98011 4244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.324.9200 fax 509.324.9290
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97003 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/01/01 14:42

BTEX Confirmation by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B1D0230-01) Water Sampled: 04/10/01 11:30 Received: 04/10/01 16:15									
Benzene	4.69	2.00	ug/l	2	1D17056	04/17/01	04/17/01	EPA 8260B	
Toluene	3.22	2.00	"	"	"	"	"	"	
Ethylbenzene	2.48	2.00	"	"	"	"	"	"	
Xylenes (total)	22.0	6.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	93.0 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	98.0 %	75-124			"	"	"	"	
Surrogate: 4-BFB	99.0 %	77-120			"	"	"	"	
RW-1 (B1D0230-02) Water Sampled: 04/10/01 12:05 Received: 04/10/01 16:15									
Benzene	174	5.00	ug/l	5	1D17056	04/17/01	04/17/01	EPA 8260B	
Toluene	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	5.00	"	"	"	"	"	"	
Xylenes (total)	ND	15.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	95.5 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	96.0 %	75-124			"	"	"	"	
Surrogate: 4-BFB	97.0 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 7



Seattle 11720 North Creek Pkwy N, Suite 300, Bothell, WA 98011 8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9209
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7122
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7988

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/01/01 14:42

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1D11043: Prepared 04/11/01 Using EPA 5030B (P/T)									
Blank (1D11043-BLK1)									
Gasoline Range Hydrocarbons	ND	50.0	ug/l						
Benzene	ND	0.500	"						
Toluene	ND	0.500	"						
Ethylbenzene	ND	0.500	"						
Xylenes (total)	ND	1.00	"						
Surrogate: 4-BFB (FID)	39.6		"	48.0		82.5	50-150		
Surrogate: 4-BFB (PID)	46.1		"	48.0		96.0	50-150		
Blank (1D11043-BLK2)									
Gasoline Range Hydrocarbons	ND	50.0	ug/l						
Benzene	ND	0.500	"						
Toluene	ND	0.500	"						
Ethylbenzene	ND	0.500	"						
Xylenes (total)	ND	1.00	"						
Surrogate: 4-BFB (FID)	44.8		"	48.0		93.3	50-150		
Surrogate: 4-BFB (PID)	49.4		"	48.0		103	50-150		
LCS (1D11043-BS1)									
Gasoline Range Hydrocarbons	513	50.0	ug/l	500		103	70-130		
Surrogate: 4-BFB (FID)	52.5		"	48.0		109	50-150		
LCS (1D11043-BS3)									
Gasoline Range Hydrocarbons	525	50.0	ug/l	500		105	70-130		
Surrogate: 4-BFB (FID)	53.3		"	48.0		111	50-150		
Duplicate (1D11043-DUP1) Source: B1D0192-02									
Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND		29.2	25	Q-05
Surrogate: 4-BFB (FID)	43.5		"	48.0		90.6	50-150		

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 3244
 425.420.9200 Fax 425.470.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99205 4776
 509.524.9200 Fax 509.924.9210
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97003 7132
 503.906.9200 Fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
 541.383.9310 Fax 541.382.7934

ERM-Bellevue
 915-118th Avenue S.E., Suite 130
 Bellevue WA, 98005

Project: Birchmount Orchard
 Project Number: 2624.20
 Project Manager: Mike Arnold

Reported:
 05/01/01 14:42

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1D11043: Prepared 04/11/01 Using EPA 5030B (P/T)										
Duplicate (1D11043-DUP2)					Source: B1D0238-03					
Gasoline Range Hydrocarbons	5830	50.0	ug/l		6130			5.02	25	
Surrogate: 4-BFB (FID)	0.00		"	48.0			50-150			S-02
Matrix Spike (1D11043-MS1)					Source: B1D0192-02					
Benzene	9.77	0.500	ug/l	10.0	ND	97.7	70-130			
Toluene	10.2	0.500	"	10.0	ND	102	70-130			
Ethylbenzene	10.6	0.500	"	10.0	ND	106	70-130			
Xylenes (total)	31.6	1.00	"	30.0	ND	105	70-130			
Surrogate: 4-BFB (PID)	53.0		"	48.0		110	50-150			
Matrix Spike Dup (1D11043-MSD1)					Source: B1D0192-02					
Benzene	9.20	0.500	ug/l	10.0	ND	92.0	70-130	6.01	15	
Toluene	9.69	0.500	"	10.0	ND	96.9	70-130	5.13	15	
Ethylbenzene	10.2	0.500	"	10.0	ND	102	70-130	3.85	15	
Xylenes (total)	31.1	1.00	"	30.0	ND	104	70-130	1.59	15	
Surrogate: 4-BFB (PID)	51.4		"	48.0		107	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 5 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 9214
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.324.9200 fax 509.324.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7598

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/01/01 14:42

BTEX Confirmation by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 1D17056: Prepared 04/17/01 Using EPA 5030B [P/T]

Blank (1D17056-BLK1)

Benzene	ND	1.00	ug/l							
Toluene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Xylenes (total)	ND	3.00	"							
Surrogate: 1,2-DCA-d4	20.4		"	20.1		101	73-137			
Surrogate: Toluene-d8	19.4		"	20.1		96.5	75-124			
Surrogate: 4-BFB	19.9		"	20.1		99.0	77-120			

LCS (1D17056-BS1)

Benzene	10.2	1.00	ug/l	10.0		102	80-120			
Toluene	9.63	1.00	"	10.0		96.3	80-120			
Surrogate: 1,2-DCA-d4	20.4		"	20.1		101	73-137			
Surrogate: Toluene-d8	19.3		"	20.1		96.0	75-124			
Surrogate: 4-BFB	19.9		"	20.1		99.0	77-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain
custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 6 of 7



Seattle 11720 North Creek Plaza N, Suite 400, Bothell, WA 98011 4244
425-420-9200 fax 425-420-9210
Spokane East 11115 Montgomery, Suite 11, Spokane, WA 99206 4776
509-924-9200 fax 509-924-9290
Portland 9305 SW Nimbus Avenue, Beaverton, OR 97003 7137
503-966-9200 fax 503-966-9210
Beaul 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541-383-9310 fax 541-382-7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/01/01 14:42

Notes and Definitions

- I-06 The analyte concentration may be artificially elevated due to coeluting compounds or components.
- Q-05 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 7 of 7



North Creek Analytical, Inc.
Environmental Laboratory Network
www.mcafab.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132
20332 Euphrate Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200 1-800-92710
(509) 924-9200 FAX 924-9290
(503) 906-9200 FAX 906-9210
(541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: **B1D0230**

CLIENT: **EKM**

INVOICE TO:

REPORT TO: **Mike Arnold**

ERM W.C.

ADDRESS: **915 118th Ave SE Suite 130
Bellevue, WA 98005**

PHONE: **(425) 462-8591** FAX: **(425) 458-3573**

P.O. NUMBER: **262420**

PROJECT NAME: **242420**

REQUESTED ANALYSES

PROJECT NUMBER: **Birchmount road**

SAMPLED BY: **M. Arnold**

CLIENT SAMPLE IDENTIFICATION

SAMPLING DATE/TIME

NWTPH 6

BTEX

MATRIX (W, S, O)

OF CONT.

COMMENTS

NCA WO ID

W 3

B1D0230 - 01

W 3

02

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses

STD.

10

7

5

4

3

2

1

<1

STD.

5

4

3

2

1

<1

OTHER

Please Specify

*Turnaround Request less than standard may incur Rush Charges.

RELINQUISHED BY: [Signature]	DATE: 4/10/01	RECEIVED BY: Karla Kuzorowski	DATE: 4/10/01
PRINT NAME: M. Arnold	FIRM: EKM	PRINT NAME: NCA	FIRM: NCA
RELINQUISHED BY: [Signature]	DATE: 4/10/01	RECEIVED BY: [Signature]	DATE: 4/10/01
PRINT NAME: M. Arnold	FIRM: EKM	PRINT NAME: NCA	FIRM: NCA
ADDITIONAL REMARKS:			
COC REV 3/99	TEMP: 5.4°	PAGE: 1	OF: 1



RECEIVED
MAY 10 2001

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 4244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-WEST, INC. FILE#
BELLEVUE, WA

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/07/01 16:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW-1	B1E0106-01	Water	05/03/01 12:24	05/04/01 09:00
MW-3	B1E0106-02	Water	05/03/01 11:23	05/04/01 09:00

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Robert Greer For Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 5



Seattle 14720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-1776
509.924.9200 fax 509.924.9290
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/07/01 16:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (B1E0106-01) Water Sampled: 05/03/01 12:24 Received: 05/04/01 09:00									
Gasoline Range Hydrocarbons	698	250	ug/l	5	1E05003	05/05/01	05/07/01	NWTPH-Gx/8021B	
Benzene	161	2.50	"	"	"	"	"	"	
Toluene	ND	2.50	"	"	"	"	"	"	
Ethylbenzene	ND	2.50	"	"	"	"	"	"	
Xylenes (total)	15.8	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	101 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	79.4 %	50-150			"	"	"	"	
MW-3 (B1E0106-02) Water Sampled: 05/03/01 11:23 Received: 05/04/01 09:00									
Gasoline Range Hydrocarbons	1820	50.0	ug/l	1	1E05003	05/05/01	05/05/01	NWTPH-Gx/8021B	
Benzene	2.84	0.500	"	"	"	"	"	"	I-06
Toluene	5.39	0.500	"	"	"	"	"	"	
Ethylbenzene	2.30	0.500	"	"	"	"	"	"	I-06
Xylenes (total)	3.66	1.00	"	"	"	"	"	"	I-
Surrogate: 4-BFB (FID)	%	50-150			"	"	"	"	S-02
Surrogate: 4-BFB (PID)	80.2 %	50-150			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Robert Greer For Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 5



Seattle 11720 North Creek Pkwy N, Suite 300, Bothell, WA 98011 3244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206 4776
509.924.9200 fax 509.921.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008 7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F 1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/07/01 16:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1E05003: Prepared 05/05/01 Using EPA 5030B (P/T)

Blank (1E05003-BLK1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	45.8		"	48.0		95.4	50-150			
Surrogate: 4-BFB (PID)	45.6		"	48.0		95.0	50-150			

Blank (1E05003-BLK2)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	49.1		"	48.0		102	50-150			
Surrogate: 4-BFB (PID)	47.3		"	48.0		98.5	50-150			

LCS (1E05003-BS1)

Gasoline Range Hydrocarbons	446	50.0	ug/l	500		89.2	70-130			
Surrogate: 4-BFB (FID)	45.3		"	48.0		94.4	50-150			

LCS (1E05003-BS2)

Gasoline Range Hydrocarbons	471	50.0	ug/l	500		94.2	70-130			
Surrogate: 4-BFB (FID)	52.4		"	48.0		109	50-150			

Duplicate (1E05003-DUP1)

Source: B1E0106-01

Gasoline Range Hydrocarbons	721	250	ug/l		698			3.24	25	
Surrogate: 4-BFB (FID)	49.7		"	48.0		104	50-150			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Robert Greer For Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 5



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9230
Portland 9105 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701 5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/07/01 16:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch 1E05003: Prepared 05/05/01 Using EPA 5030B (P/T)

Matrix Spike (1E05003-MS1)

Source: B1E0106-02

Benzene	10.6	0.500	ug/l	10.0	2.84	77.6	70-130		
Toluene	9.61	0.500	"	10.0	5.39	42.2	70-130		Q-03
Ethylbenzene	10.2	0.500	"	10.0	2.30	79.0	70-130		
Xylenes (total)	39.5	1.00	"	30.0	3.66	119	70-130		
Surrogate: 4-BFB (PID)	48.9		"	48.0		102	50-150		

Matrix Spike Dup (1E05003-MSD1)

Source: B1E0106-02

Benzene	10.7	0.500	ug/l	10.0	2.84	78.6	70-130	0.939	15	
Toluene	9.86	0.500	"	10.0	5.39	44.7	70-130	2.57	15	Q-03
Ethylbenzene	10.5	0.500	"	10.0	2.30	82.0	70-130	2.90	15	
Xylenes (total)	40.7	1.00	"	30.0	3.66	123	70-130	2.99	15	
Surrogate: 4-BFB (PID)	49.9		"	48.0		104	50-150			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain
custody document. This analytical report must be reproduced in its entirety.*

Robert Greer For Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 5



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011 8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9305 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 29332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERM-Bellevue
915-118th Avenue S.E., Suite 130
Bellevue WA, 98005

Project: Birchmount Orchard
Project Number: 2624.20
Project Manager: Mike Arnold

Reported:
05/07/01 16:31

Notes and Definitions

- I-06 The analyte concentration may be artificially elevated due to coeluting compounds or components.
- Q-03 The percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Robert Greer For Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 5



(405) 420-0000	V. 000-9210
(509) 924-9200	X 924-9290
(503) 906-9200	-AX 906-9210
(541) 382-9310	RAY 382-7588

Work Order #: 241222

INVOICE TO: THE ERM

Assets Accounts Payable

1777 Botelho Drive Suite 260
Belmont CA 94159

FAX: (415) 455-3573 PO. NUMBER: 7624.70

REQUESTED ANALYSES

Year	Percent
1960	25
1970	35
1980	55
1990	75

SAMPLING
DATE/TIME

MATRIX	# OF
(W.S. 0)	CONT.

COMMENTS
20106

MCAC-WC
ID

06/03/2011 11:13

2

1

10

1

1

1

1

1

1

John

1

271

三

JALB

100

[illegible]