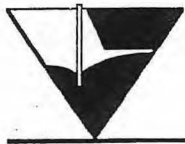


**GROUNDWATER QUALITY ASSESSMENT
FOR
QUAD MILL SITE
PHILOMATH, OREGON**

JULY 30, 2001

**Prepared for:
TreeSource Industries, Inc.**

**Prepared by:
EGR & Associates, Inc.
2535 B Prairie Road
Eugene, Oregon 97402
Telephone (541) 688-8322 FAX (541) 688-8087**



July 30, 2001

Al Mick
TreeSource Industries, Inc.
529 S.E. Grand, Suite 300
Portland, OR 97214

RE: Quad Mill Site, Philomath, OR

Dear Mr. Mick:

Enclosed are five copies of the groundwater quality assessment report we have prepared for the Quad Mill Site in Philomath, Oregon. Based upon the data supplied and a site visit, we find no significant impact to groundwater quality related to the former log pond.

We thank you for the opportunity to review the data for this site and look forward to working with you for future needs. Please feel free to call with any questions or comments.

Sincerely,

Ralph Christensen
EGR & Associates, Inc.

A site walkover and review of the groundwater data at the Quad Mill Site, Philomath has been conducted, and we find no significant or unusual impact to the groundwater at this time, based upon the analytical data supplied. Data reviewed consisted of:

- Field Measurements (pH, conductivity, dissolved oxygen, Eh, temperature, and water elevation)
- North Creek Analytical chemical analyses (NWTPH-Dx, Arsenic, Iron, Manganese, COD, Tannins & Lignins, TDS, TSS, Zinc, BOD, Ammonia-N, TOC, Chloride, Nitrate-N, Nitrite-N, Sulfate, Fecal Coliforms, TOX)

Groundwater elevations indicate that well MW-1 is approximately hydraulically up-gradient of the former log pond and mill, well MW-2 is approximately cross- to down-gradient of the former log pond and mill, and well MW-3 is approximately down-gradient of the former log pond and mill. Please see the two attached figures prepared by LPG Associates, Inc. in their March 21, 2001 memorandum. A site location map has also been supplied to illustrate that the groundwater is flowing toward Marys River, as one should expect.

Based upon the apparent hydraulic gradient, determination of possible impact was based upon comparison of MW-2 data to MW-1 data, and comparison of MW-3 to MW-1 data. From such comparisons, we find the following:

- 1) Similar pH and Eh across the site
- 2) Similar conductivity between MW-1 and MW-2 but significantly greater conductivity in MW-3
- 3) Reduced DO in both MW-2 and MW-3 compared to MW-1
- 4) Similar levels of arsenic, BOD, nitrite, ammonia, tannins & lignins, fecal coliforms, and TPH-Oil range, in all wells
- 5) Similar levels of iron, zinc, TSS, COD, TOC, TOX (total organic halides), and TPH-Diesel range between MW-2 and MW-1, but elevated levels in MW-3 compared to MW-1
- 6) Increased levels of chloride, manganese, and TDS in both MW-2 and MW-3 compared to MW-1
- 7) Decreased levels of sulfate and nitrate in MW-2 and MW-3 compared to MW-1.

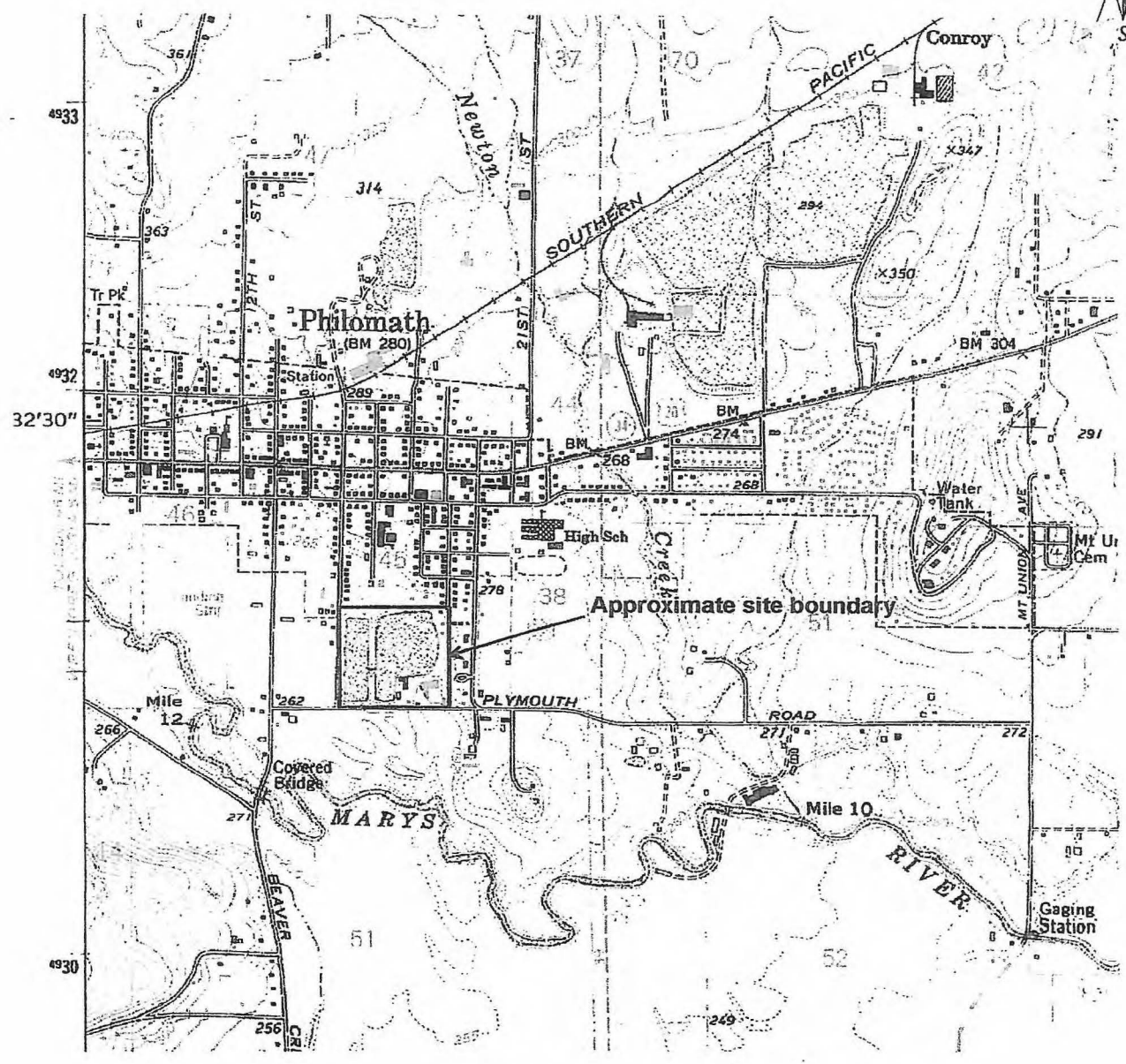
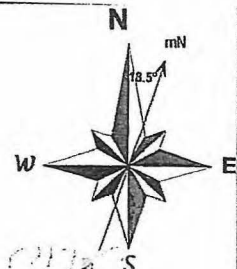
The above-mentioned findings indicate that groundwater has possibly been mildly modified by the historic onsite activities, but at levels one normally expects from such a wood processing facility. The reduced DO, nitrate, and sulfate in MW-2 and MW-3, combined with the elevated iron, COD, TOC, TOX, and TPH-Diesel¹ in MW-3, indicates that the old log pond site may have caused an increase in the organic loading to the aquifer, followed by aerobic and anoxic microbial degradation of the organics. Alternatively, it can also indicate that MW-1 is nearest an off-site source of the nutrient loading (nitrate and sulfate), and that wells MW-2 and MW-3 are farther from the source. As these trends in groundwater quality can be induced simply by a high organic content soil, it is difficult to conclude if the trends are caused by historic onsite activities increasing the local organic content, or if it is due to previous naturally occurring organics in the soil.

¹ Note that the lab report indicates that the TPH-Diesel detection is a diesel-range organic, but not likely a petroleum compound. This is fairly common in soils with significant organic content. The detection is most likely due to plant or microbial activity and may or may not be related specifically to the log pond.

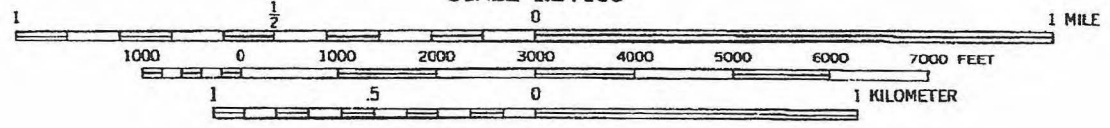
The elevated manganese and chloride in wells MW-2 and MW-3, and the high iron and TDS in MW-3 indicate that those two wells are in more reducing environments than up-gradient well MW-1. Reducing conditions will mobilize naturally occurring iron and other salts. While the high iron, manganese, and TDS concentrations in MW-3 are substantially greater than current drinking water standards, the similar pH and Eh across the site suggests there is little change in the oxidative/reductive potential of the aquifer across the site. This generally means there is not a heavy impact to the environment.

The lack of increase in tannins and lignins in MW-2 and MW-3 is an indication that either no impact to the aquifer has resulted from the on-site activities, or that the contamination is at a very low level such that indigenous microbial and plant activity is remediating the site. In either case, we believe that the subject property is not a source for environmental concern at this juncture. Over time, the situation should continue to stabilize and up-gradient and down-gradient wells will approach equal conditions. A twenty-year time frame would be expected to ameliorate the situation fully. No action or intervention is considered necessary for this site.

Attachments: Diagrams and Laboratory data

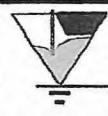


SCALE 1:24 000



CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

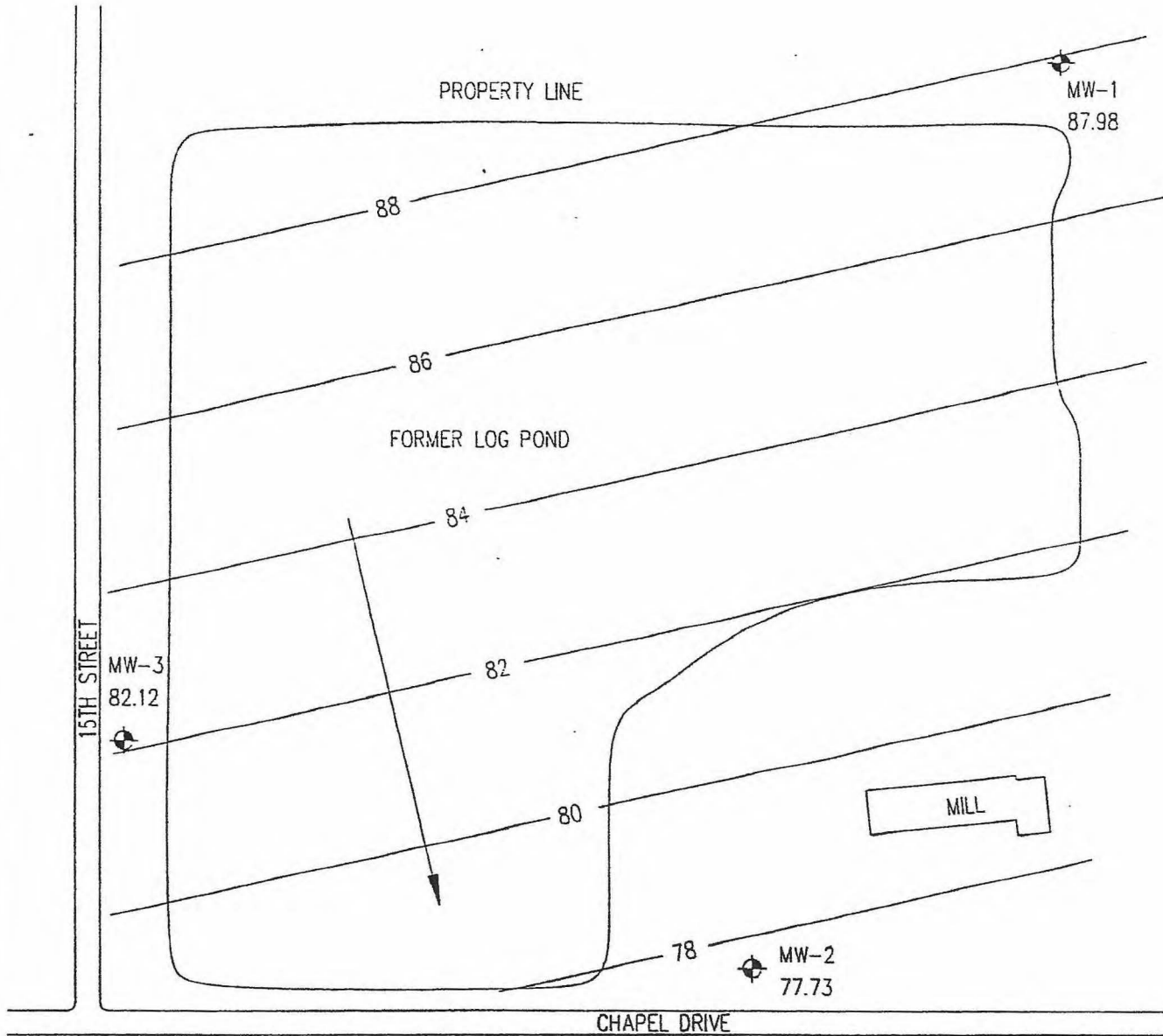
**Property Boundary on
USGS Topo Map:
Corvallis Quadrangle**



EGR & Associates, Inc.
Engineers, Geologists and Surveyors

2535 B Prairie Road
Phone (541) 688-8322
FAX (541) 688-8087

**Quad Mill Site
Philomath, OR**



MW-1
90.04



MONITORING WELL AND STATIC WATER LEVEL



SCALE

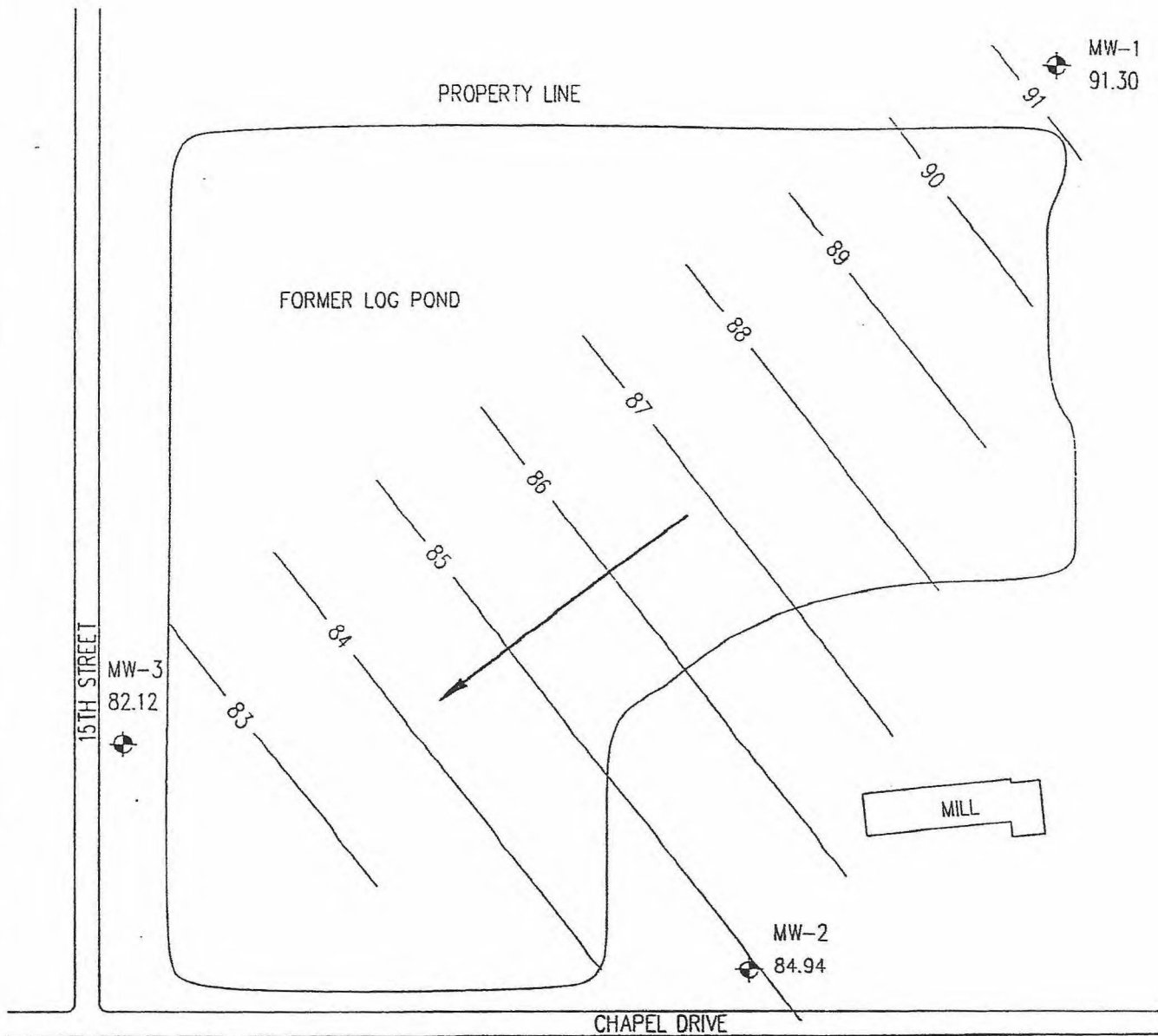
GROUNDWATER FLOW MAP
NOVEMBER 15, 2000
TREESOURCE, INC.
PHILOMATH, OREGON

FIGURE 1

TSPHIL.DWG

1/20/00

ALL FEATURES SHOWN ARE APPROXIMATE.



MW-1
90.04

MONITORING WELL AND STATIC WATER LEVEL



SCALE

GROUNDWATER FLOW MAP
 FEBRUARY 13, 2001
 TREESOURCE, INC.
 PHILOMATH, OREGON

FIGURE 2

TSPHIL.DWG

19/01

ALL FEATURES SHOWN ARE APPROXIMATE



425.420.9200 fax 425.420.9210
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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 541.382.7538


December, 2000

Ant Meisel
G Associates, Inc.
537 S.E. Ash, #12
Portland, OR 97214

Re: Philomath

Enclosed are the results of analyses for samples received by the laboratory on 11/16/00 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,


Howard Holmes
Project Manager

Work Orders included in this report:
P0K0432

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

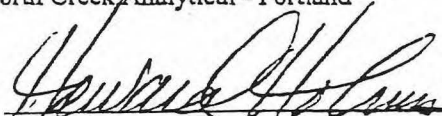
 Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel

 Reported:
 12/08/00 16:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	P0K0432-01	Water	11/15/00 12:00	11/16/00 15:15
MW-2	P0K0432-02	Water	11/15/00 12:00	11/16/00 15:15
MW-3	P0K0432-03	Water	11/15/00 12:00	11/16/00 15:15

North Creek Analytical - Portland


 Edward Holmes, 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.



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 509.924.9200 fax 509.924.9290
 Portland 3405 SW Nilsson Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Emore Avenue, Suite F-1, Bend, OR 97701-5711
 541.382.9310 fax 541.382.7588

G Associates, Inc.
 7 S.E. Ash, #12
 Portland, OR 97214

Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel


Reported:
 12/08/00 16:27

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method
North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
V-1 (P0K0432-01) Water						Sampled: 11/15/00 Received: 11/16/00			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	11/21/00	11/27/00	01107-1	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Sur: 1-Chlorooctadecane	2.80 %	50-150							S-04
VW-2 (P0K0432-02) Water						Sampled: 11/15/00 Received: 11/16/00			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	11/21/00	11/27/00	01107-1	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Sur: 1-Chlorooctadecane	3.45 %	50-150							S-04
V-3 (P0K0432-03) Water						Sampled: 11/15/00 Received: 11/16/00			
Diesel Range Organics	0.535	0.250	mg/l	1	NWTPH-Dx	11/21/00	11/27/00	01107-1	D-15
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Sur: 1-Chlorooctadecane	12.5 %	50-150							S-04

North Creek Analytical - Portland

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 Edward Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

 Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel


 Reported:
 12/08/00 16:27

Dissolved Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting		Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
		Limit								
MW-1 (P0K0432-01) Water						Sampled: 11/15/00 Received: 11/16/00				
Arsenic	0.00110	0.00100	mg/l	1	EPA 6020	11/28/00	11/29/00	0110930		
Iron	ND	0.100	"	"	EPA 6010A	11/29/00	12/01/00	0110997		
Manganese	0.0540	0.0100	"	"	"	"	12/04/00	"		
MW-2 (P0K0432-02) Water						Sampled: 11/15/00 Received: 11/16/00				
Arsenic	ND	0.00100	mg/l	1	EPA 6020	11/28/00	11/29/00	0110930		
Iron	ND	0.100	"	"	EPA 6010A	11/29/00	12/01/00	0110997		
Manganese	0.331	0.0100	"	"	"	"	12/04/00	"		
MW-3 (P0K0432-03) Water						Sampled: 11/15/00 Received: 11/16/00				
Arsenic	ND	0.00100	mg/l	1	EPA 6020	11/28/00	11/29/00	0110930		
Iron	ND	0.100	"	"	EPA 6010A	11/29/00	12/01/00	0110997		
Manganese	0.947	0.0100	"	"	"	"	12/04/00	"		

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

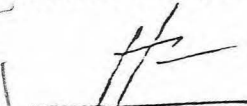
Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel

**Conventional Chemistry Parameters per APHA/EPA Methods
 North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	
MW-1 (P0K0432-01) Water						Sampled: 11/15/00		Received: 11/16/00
Chemical Oxygen Demand	ND	5.00	mg/l	1	EPA 410.4	12/01/00	12/01/00	012
Tannins & Lignins	ND	0.250	"	"	SM 5550B	11/29/00	11/29/00	0110
Total Dissolved Solids	356	10.0	"	"	EPA 160.1	11/20/00	11/22/00	0110
Total Suspended Solids	133	10.0	"	"	EPA 160.2	11/20/00	11/28/00	0110
MW-2 (P0K0432-02) Water						Sampled: 11/15/00		Received: 11/16/00
Chemical Oxygen Demand	ND	5.00	mg/l	1	EPA 410.4	12/01/00	12/01/00	012002
Tannins & Lignins	ND	0.250	"	"	SM 5550B	11/29/00	11/29/00	011097
Total Dissolved Solids	416	10.0	"	"	EPA 160.1	11/20/00	11/22/00	0110716
Total Suspended Solids	44.0	10.0	"	"	EPA 160.2	11/21/00	11/27/00	0110735
MW-3 (P0K0432-03) Water						Sampled: 11/15/00		Received: 11/16/00
Chemical Oxygen Demand	16.4	5.00	mg/l	1	EPA 410.4	12/01/00	12/01/00	0120022
Tannins & Lignins	ND	0.250	"	"	SM 5550B	11/29/00	11/29/00	0110974
Total Dissolved Solids	707	14.7	"	"	EPA 160.1	11/20/00	11/22/00	0110716
Total Suspended Solids	287	10.0	"	"	EPA 160.2	11/21/00	11/27/00	0110735

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel

Reported:
 12/08/00 16:27

Diesel and Heavy Range Hydrocarbons per NW TPH-D Method - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Notes
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Batch 0110741 - EPA 3510 Fuels

Blank (0110741-BLK1)

Prepared: 11/21/00 Analyzed: 11/27/00

Diesel Range Organics	ND	0.250	mg/l							
Heavy Oil Range Hydrocarbons	ND	0.500	"							

Surr: 1-Chlorooctadecane	0.103		"	0.0960		107	50-150			
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LCS (0110741-BS1)

Prepared: 11/21/00 Analyzed: 11/27/00

Diesel Range Organics	2.41	0.250	mg/l	2.58		93.4	50-150			
Heavy Oil Range Hydrocarbons	1.43	0.500	"	1.58		90.5	50-150			

Surr: 1-Chlorooctadecane	0.104		"	0.0960		108	50-150			
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LCS Dup (0110741-BSD1)

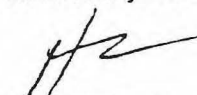
Prepared: 11/21/00 Analyzed: 11/27/00

Diesel Range Organics	2.42	0.250	mg/l	2.58		93.8	50-150	0.414	50	
Heavy Oil Range Hydrocarbons	1.56	0.500	"	1.58		98.7	50-150	8.70	50	

Surr: 1-Chlorooctadecane	0.111		"	0.0960		116	50-150			
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North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

Page 5 of 10



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 503.680.9200 fax 503.606.9210
 Bend 2000 Embury Avenue, Suite F-1, Bend, OR 97701-5711
 541.322.9210 fax 541.382.7598

PG Associates, Inc. Project: Philomath
 37 S.E. Ash, #12 Project Number: 1613
 Portland, OR 97214 Project Manager: Kent Meisel
 Reported: 12/08/00 16:27

Dissolved Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0110930 - EPA 200/3005

Blank (0110930-BLK1) Prepared: 11/28/00 Analyzed: 12/01/00

Arsenic	ND	0.00100	mg/l							
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ICS (0110930-BS1) Prepared: 11/28/00 Analyzed: 12/01/00

Arsenic	0.0981	0.0100	mg/l	0.100		98.1	80-120			
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Duplicate (0110930-DUP1) Source: P0K0369-07 Prepared: 11/28/00 Analyzed: 12/01/00

Arsenic	0.00227	0.00100	mg/l	0.00250				1.31	20	
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Matrix Spike (0110930-MS1) Source: P0K0369-07 Prepared: 11/28/00 Analyzed: 12/01/00

Arsenic	0.104	0.0100	mg/l	0.100	ND	102	75-125			
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Matrix Spike (0110930-MS2) Source: P0K0495-01 Prepared: 11/28/00 Analyzed: 11/29/00

Arsenic	0.112	0.00100	mg/l	0.100	0.00324	109	75-125			
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Batch 0110997 - EPA 200/3005 Diss

Blank (0110997-BLK1) Prepared: 11/29/00 Analyzed: 12/01/00

Iron	ND	0.100	mg/l							
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Manganese	ND	0.0100	"							
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ICS (0110997-BS1) Prepared: 11/29/00 Analyzed: 12/01/00

Iron	2.05	0.100	mg/l	2.00		102	91.5-108			
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Manganese	0.521	0.0100	"	0.500		104	91.7-113			
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Duplicate (0110997-DUP1) Source: P0K0434-01 Prepared: 11/29/00 Analyzed: 12/01/00

Iron	49.0	0.100	mg/l	46.9				4.38	20	
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Manganese	7.01	0.0100	"	7.06				0.711	20	
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North Creek Analytical - Portland

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Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel

Reported:
 12/08/00 16:27

Dissolved Metals per EPA 6000/3005 Semi-Annual Methods - Quality Control

North Creek Analytical - Portland

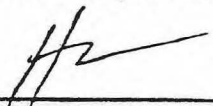
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
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Batch 0110997 - EPA 200/3005 Diss

Matrix Spike (0110997-MS1)	Source: P0K0434-01	Prepared: 11/29/00	Analyzed: 12/01/00
Iron	49.8	0.100 mg/l	2.00
Manganese	7.55	0.0100 "	0.500

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network



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 541.383.9500 fax 541.382.7588

G Associates, Inc. Project: Philomath
 S.E. Ash, #12 Project Number: 1613 Reported:
 Portland, OR 97214 Project Manager: Kent Meisel 12/08/00 16:27

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control

North Creek Analytical - Portland

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

Batch 0110706 - Wet Chem

Blank (0110706-BLK1) Prepared: 11/20/00 Analyzed: 11/28/00

Total Suspended Solids	ND	10.0	mg/l							
------------------------	----	------	------	--	--	--	--	--	--	--

(0110706-BS1) Prepared: 11/20/00 Analyzed: 11/28/00

Total Suspended Solids	51.0	10.0	mg/l	60.3	34.5	80-120				
------------------------	------	------	------	------	------	--------	--	--	--	--

Duplicate (0110706-DUP1) Source: POK0378-01 Prepared: 11/20/00 Analyzed: 11/28/00

Suspended Solids	ND	10.0	mg/l		ND			20		
------------------	----	------	------	--	----	--	--	----	--	--

Batch 0110716 - Wet Chem

Blank (0110716-BLK1) Prepared: 11/20/00 Analyzed: 11/22/00

Total Dissolved Solids	ND	10.0	mg/l							
------------------------	----	------	------	--	--	--	--	--	--	--

(0110716-BS1) Prepared: 11/20/00 Analyzed: 11/22/00

Dissolved Solids	112	10.0	mg/l	103	109	80-120				
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Duplicate (0110716-DUP1) Source: POK0432-02 Prepared: 11/20/00 Analyzed: 11/22/00

Dissolved Solids	423	10.0	mg/l	416			1.67	20		
------------------	-----	------	------	-----	--	--	------	----	--	--

Batch 0110735 - Wet Chem

Blank (0110735-BLK1) Prepared: 11/21/00 Analyzed: 11/27/00

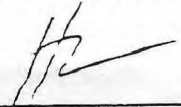
Suspended Solids	ND	10.0	mg/l							
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CS (0110735-BS1) Prepared: 11/21/00 Analyzed: 11/27/00

Suspended Solids	58.0	10.0	mg/l	60.3	96.2	80-120				
------------------	------	------	------	------	------	--------	--	--	--	--

North Creek Analytical - Portland

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.


 Kent Holmes, Project Manager

LPG Associates, Inc. 537 S.E. Ash, #12 Portland, OR 97214	Project: Philomath Project Number: 1613 Project Manager: Kent Meisel	Reported: 12/08/00 16:27
---	--	-----------------------------

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control

North Creek Analytical - Portland

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

Batch 0110735 - Wet Chem

Duplicate (0110735-DUP1)		Source: P0K0432-02		Prepared: 11/21/00		Analyzed: 11/27/00				
Total Suspended Solids	43.0	10.0	mg/l		44.0			2.30	20	

Batch 0110974 - Wet Chem

Blank (0110974-BLK1)				Prepared & Analyzed: 11/29/00						
Tannins & Lignins	ND	0.250	mg/l							

LCS (0110974-BS1)				Prepared & Analyzed: 11/29/00						
Tannins & Lignins	1.91	0.250	mg/l	2.00		95.5	85-115			

Duplicate (0110974-DUP1)		Source: P0K0257-01RE1		Prepared & Analyzed: 11/29/00						
Tannins & Lignins	0.551	0.250	mg/l		0.551			0	20	

Matrix Spike (0110974-MS1)		Source: P0K0257-01RE1		Prepared & Analyzed: 11/29/00						
Tannins & Lignins	2.58	0.250	mg/l	2.00	0.551	101	75-125			

Batch 0120022 - Wet Chem

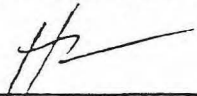
Blank (0120022-BLK1)				Prepared & Analyzed: 12/01/00						
Chemical Oxygen Demand	ND	5.00	mg/l							

LCS (0120022-BS1)				Prepared & Analyzed: 12/01/00						
Chemical Oxygen Demand	28.0	5.00	mg/l	30.0		93.3	75-125			

Duplicate (0120022-DUP1)		Source: P0K0394-01		Prepared & Analyzed: 12/01/00						
Chemical Oxygen Demand	26.7	5.00	mg/l		31.0			14.9	20	

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

PG Associates, Inc.
 S.E. Ash, #12
 Portland, OR 97214

Project: Philomath
 Project Number: 1613
 Project Manager: Kent Meisel

Reported:
 12/08/00 16:27

Notes and Definitions

D-15 Detected hydrocarbons have non-petroleum peaks or elution pattern that suggests the presence of biogenic interference.

02 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

5-04 Surrogate recovery is outside of method established control limits.

T Analyte DETECTED

NR Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

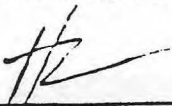
Sample results reported on a dry weight basis

wet Sample results reported on a wet weight basis

D Relative Percent Difference

North Creek Analytical - Portland

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.


 Edward Holmes, Project Manager

Sample Transmittal

PO# 0432

Project Name: Philomath-Quad Mill

Project Number: 1613

Page: 1 of 1

Date: November 16, 2000

Analysis Requested

Laboratory: North Creek Analytical

Results Due: Normal Turn Around Time

LPG Contact: Kent Meisel

Sample Information		Container Information			TSS	TDS	COD	TANNIN/LIGNIN	MUTPH PH	Dissolved Iron	Dissolved Manganese	Dissolved Arsenic
Identification	Date	Type	Size	Quantity								
MW-1	11/15/00	P	1L	1	✓	✓	✓	✓	✓	✓	✓	✓
		P	250m	2								
✓	✓	G	9 oz	4								
MW-2	11/15/00	P	1L	2								
		P	250m	1								
↓	✓	G	9 oz	4								
MW-3	11/15/00	P	1L	1								
		P	250m	2								
↓	✓	G	9 oz	4	✓	✓	✓	✓	✓	✓	✓	✓

Comments: _____

CHAIN OF CUSTODY

Relinquished by:

Date/Time

Received by:

<i>Kent Meisel</i>	11-16-00 1140	<i>James J. Oswald</i>
<i>James J. Oswald</i>	11/16/00 1332	<i>[Signature]</i>
<i>[Signature]</i>	11-16-00	<i>Dena Sarvella</i> 11-16-00



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-3244
425.420.3200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite 3, Spokane, WA 99206-4776
509.924.3200 fax 509.924.9230
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.306.9200 fax 503.306.9210
Bend 20302 Emora Avenue, Suite 2-1, Bend, OR 97701-5711
541.383.9310 fax 541.392.7536

March, 2001

Arnold
G Associates, Inc.
37 S.E. Ash, #12
Portland, OR 97214

Tree Source Monitoring Wells

Enclosed are the results of analyses for samples received by the laboratory on 02/13/01 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,


Edward Holmes
Project Manager

Work Orders included in this report:

1B0324

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

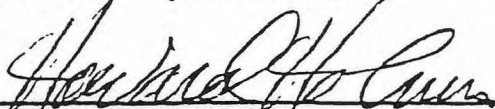
 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	P1B0324-01	Water	02/13/01 12:00	02/13/01 16:30
MW-2	P1B0324-02	Water	02/13/01 12:00	02/13/01 16:30
MW-3	P1B0324-03	Water	02/13/01 12:00	02/13/01 16:30

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network



Spokane 425.420.3200 fax 425.420.3210
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.324.9200 fax 509.324.9290
 Portland 9475 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
 541.382.9210 fax 541.382.7588

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

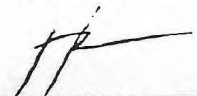
Reported:
 03/05/01 12:42

**Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method with Acid/Silica Gel Cleanup
 North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
MW-1 (P1B0324-01) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	02/16/01	02/20/01	1020487	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	102 %	50-150							
MW-2 (P1B0324-02) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	02/16/01	02/20/01	1020487	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	96.1 %	50-150							
MW-3 (P1B0324-13) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	02/16/01	02/20/01	1020487	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	99.6 %	50-150							

North Creek Analytical - Portland

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.


 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
537 S.E. Ash, #12
Portland, OR 97214

Project: Tree Source Monitoring Wells
Project Number: 1613
Project Manager: Jim Arnold

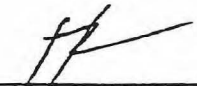
Reported:
03/05/01 12:42

Total Metals per EPA 200 Series Methods
North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
MW-1 (P1B0324-01) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Iron	0.0920	0.0200	mg/l	1	EPA 200.7	02/15/01	02/28/01	1020443	
MW-2 (P1B0324-02) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Iron	0.0820	0.0200	mg/l	1	EPA 200.7	02/15/01	02/28/01	1020443	
MW-3 (P1B0324-03) Water									
						Sampled: 02/13/01 Received: 02/13/01			
Iron	1.78	0.0200	mg/l	1	EPA 200.7	02/15/01	02/28/01	1020443	

North Creek Analytical - Portland

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.


Howard Holmes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

PG Associates, Inc.
57 S.E. Ash, #12
Portland, OR 97214

Project: Tree Source Monitoring Wells
Project Number: 1613
Project Manager: Jim Arnold


Reported:
03/05/01 12:42

Dissolved Metals per EPA 200 Series Methods
North Creek Analytical - Portland

Sample	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
W-1 (P1B0324-01) Water						Sampled: 02/13/01 Received: 02/13/01			
Arsenic	0.00171	0.00100	mg/l	1	EPA 200.8	02/15/01	02/15/01	1020443	
Manganese	0.00427	0.00200	"	"	"	"	02/23/01	"	
Zinc	0.00623	0.00500	"	"	"	"	02/15/01	"	
W-2 (P1B0324-02) Water						Sampled: 02/13/01 Received: 02/13/01			
Arsenic	ND	0.00100	mg/l	1	EPA 200.8	02/15/01	02/15/01	1020443	
Manganese	0.529	0.00200	"	"	"	"	02/23/01	"	
Zinc	0.00727	0.00500	"	"	"	"	02/15/01	"	
W-3 (P1B0324-03) Water						Sampled: 02/13/01 Received: 02/13/01			
Arsenic	0.00169	0.00100	mg/l	1	EPA 200.8	02/15/01	02/15/01	1020443	
Manganese	1.00	0.0145	"	7.25	"	"	02/23/01	"	
Zinc	0.0118	0.00500	"	1	"	"	02/15/01	"	

North Creek Analytical - Portland

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Edward Holmes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

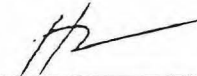
LPG Associates, Inc. 537 S.E. Ash, #12 Portland, OR 97214	Project: Tree Source Monitoring Wells Project Number: 1613 Project Manager: Jim Arnold	Reported: 03/05/01 12:42
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Conventional Chemistry Parameters per APHA/EPA Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
MW-1 (P1B0324-01) Water						Sampled: 02/13/01 Received: 02/13/01			
Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	02/15/01	02/15/01	1020467	
Biochemical Oxygen Demand	ND	4.00	"	"	EPA 405.1	02/14/01	02/19/01	1020399	
Chemical Oxygen Demand	ND	5.00	"	"	EPA 410.4	02/16/01	02/16/01	1020484	
Tannins & Lignins	ND	0.250	"	"	SM 5550B	02/23/01	02/23/01	1020707	
Total Dissolved Solids	348	10.0	"	"	EPA 160.1	02/19/01	02/20/01	1020552	
Total Suspended Solids	28.0	10.0	"	"	EPA 160.2	02/16/01	02/17/01	1020510	
Total Organic Carbon	ND	1.00	"	"	EPA 415.1	02/19/01	02/20/01	1020468	
MW-2 (P1B0324-02) Water						Sampled: 02/13/01 Received: 02/13/01			
Ammonia-Nitrogen	0.0600	0.0500	mg/l	1	EPA 350.1	02/15/01	02/15/01	1020467	
Biochemical Oxygen Demand	ND	4.00	"	"	EPA 405.1	02/14/01	02/19/01	1020399	
Chemical Oxygen Demand	ND	5.00	"	"	EPA 410.4	02/16/01	02/16/01	1020484	
Tannins & Lignins	ND	0.250	"	"	SM 5550B	02/23/01	02/23/01	1020707	
Total Dissolved Solids	432	10.0	"	"	EPA 160.1	02/19/01	02/20/01	1020552	
Total Suspended Solids	24.0	10.0	"	"	EPA 160.2	02/16/01	02/17/01	1020510	
Total Organic Carbon	ND	1.00	"	"	EPA 415.1	02/19/01	02/20/01	1020468	
MW-3 (P1B0324-03) Water						Sampled: 02/13/01 Received: 02/13/01			
Ammonia-Nitrogen	ND	0.0500	mg/l	1	EPA 350.1	02/15/01	02/15/01	1020467	
Biochemical Oxygen Demand	ND	4.00	"	"	EPA 405.1	02/14/01	02/19/01	1020399	
Chemical Oxygen Demand	20.6	5.00	"	"	EPA 410.4	02/16/01	02/16/01	1020484	
Tannins & Lignins	ND	0.250	"	"	SM 5550B	02/23/01	02/23/01	1020707	
Total Dissolved Solids	697	14.9	"	"	EPA 160.1	02/20/01	02/21/01	1020534	
Total Suspended Solids	459	15.9	"	"	EPA 160.2	02/16/01	02/17/01	1020510	
Total Organic Carbon	6.40	1.00	"	"	EPA 415.1	02/19/01	02/20/01	1020468	

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Associates, Inc.
 700 E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

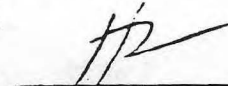
 Reported:
 03/05/01 12:42

Anions per EPA Method 300.0

North Creek Analytical - Portland

	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
W-1 (P1B0324-01) Water						Sampled: 02/13/01 Received: 02/13/01			
Chloride	22.1	0.500	mg/l	1	EPA 300.0	02/14/01	02/14/01	1020411	
Nitrate-Nitrogen	2.65	0.100	"	"	"	"	"	"	
Nitrite-Nitrogen	ND	0.100	"	"	"	"	"	"	
Fluoride	13.2	1.00	"	"	"	"	"	"	
W-2 (P1B0324-02) Water						Sampled: 02/13/01 Received: 02/13/01			
Chloride	59.6	5.00	mg/l	10	EPA 300.0	02/14/01	02/14/01	1020411	
Nitrate-Nitrogen	ND	0.100	"	1	"	"	02/14/01	"	
Nitrite-Nitrogen	ND	0.100	"	"	"	"	"	"	
Fluoride	5.01	1.00	"	"	"	"	"	"	
W-3 (P1B0324-03) Water						Sampled: 02/13/01 Received: 02/13/01			
Chloride	33.0	0.500	mg/l	1	EPA 300.0	02/14/01	02/14/01	1020411	
Nitrate-Nitrogen	ND	0.100	"	"	"	"	"	"	
Nitrite-Nitrogen	ND	0.100	"	"	"	"	"	"	
Fluoride	2.31	1.00	"	"	"	"	"	"	

North Creek Analytical - Portland

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 Ward Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network

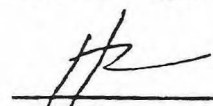
LPG Associates, Inc. 537 S.E. Ash, #12 Portland, OR 97214	Project: Tree Source Monitoring Wells Project Number: 1613 Project Manager: Jim Arnold	Reported: 03/05/01 12:42
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Microbiological Parameters per APHA Standard Methods
North Creek Analytical - Portland

Analyte	Result	Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
MW-1 (P1B0324-01) Water						Sampled: 02/13/01 Received: 02/13/01			
Fecal Coliforms	ND	2.00	MPN/100 ml	1	SM 9221	02/14/01	02/15/01	1020398	
MW-2 (P1B0324-02) Water						Sampled: 02/13/01 Received: 02/13/01			
Fecal Coliforms	ND	2.00	MPN/100 ml	1	SM 9221	02/14/01	02/15/01	1020398	
MW-3 (P1B0324-03) Water						Sampled: 02/13/01 Received: 02/13/01			
Fecal Coliforms	ND	2.00	MPN/100 ml	1	SM 9221	02/14/01	02/15/01	1020398	

North Creek Analytical - Portland

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 David Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network



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 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
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 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.8710 fax 541.382.7588

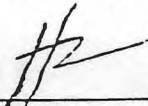
G Associates, Inc. Project: Tree Source Monitoring Wells
 557 S.E. Ash, #12 Project Number: 1613
 Portland, OR 97214 Project Manager: Jim Arnold Reported: 03/05/01 12:42

Conventional Chemistry Parameters by APHA/EPA Methods
North Creek Analytical - Bothell

Sample	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
						Sampled: 02/13/01	Received: 02/13/01		
Y-1 (P1B0324-01) Water									
Total Organic Halides	ND	0.0200	mg/l	1	EPA 9020B	02/23/01	02/23/01	1B26034	
						Sampled: 02/13/01	Received: 02/13/01		
Y-2 (P1B0324-02) Water									
Total Organic Halides	ND	0.0200	mg/l	1	EPA 9020B	02/23/01	02/23/01	1B26034	
						Sampled: 02/13/01	Received: 02/13/01		
Y-3 (P1B0324-03) Water									
Total Organic Halides	0.297	0.100	mg/l	5	EPA 9020B	02/26/01	02/26/01	1B26034	

North Creek Analytical - Portland

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.


 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

Diesel and Heavy Range Hydrocarbons per NW EPC-10 Method with Acid/Silica Gel Cleanup - Quality Control
North Creek Analytical - Portland

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

Batch 1020487 - EPA 3510 Fuels
Blank (1020487-BLK1)

Prepared: 02/16/01 Analyzed: 02/20/01

Diesel Range Organics	ND	0.250	mg/l						
Heavy Oil Range Hydrocarbons	ND	0.500	"						
Surr: 1-Chlorooctadecane	0.0949		"	0.0960		98.9	50-150		

LCS (1020487-BS1)

Prepared: 02/16/01 Analyzed: 02/20/01

Diesel Range Organics	2.24	0.250	mg/l	2.58		86.3	50-150		
Heavy Oil Range Hydrocarbons	1.48	0.500	"	1.58		93.7	50-150		
Surr: 1-Chlorooctadecane	0.0954		"	0.0960		99.4	50-150		

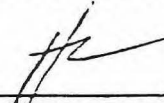
LCS Dup (1020487-BSD1)

Prepared: 02/16/01 Analyzed: 02/20/01

Diesel Range Organics	2.21	0.250	mg/l	2.58		85.7	50-150	1.35	50
Heavy Oil Range Hydrocarbons	1.47	0.500	"	1.58		93.0	50-150	0.678	50
Surr: 1-Chlorooctadecane	0.0980		"	0.0960		102	50-150		

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-3244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
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 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.3200 fax 503.906.9210
 Bend 20222 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588

PG Associates, Inc. Project: Tree Source Monitoring Wells
 537 S.E. Ash, #12 Project Number: 1613
 Portland, OR 97214 Project Manager: Jim Arnold Reported: 03/05/01 12:42

Total Metals per EPA 200 Series Methods - Quality Control

North Creek Analytical - Portland

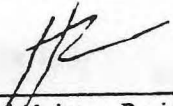
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD	Notes
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Batch 1020443 - EPA 200/3005 Diss

Blank (1020443-BLK1)	ND	0.0200	mg/l							
								Prepared: 02/15/01	Analyzed: 02/23/01	
BS (1020443-BS1)										
								Prepared: 02/15/01	Analyzed: 02/23/01	
Iron	ND	0.0200	mg/l	0.100		85-115				A-05
Duplicate (1020443-DUP1)										
								Prepared: 02/15/01	Analyzed: 02/23/01	
Iron	4.99	0.0200	mg/l	4.97		0.402	20			
Matrix Spike (1020443-MS1)										
								Prepared: 02/15/01	Analyzed: 02/23/01	
1	5.00	0.0200	mg/l	0.100	4.97	30.0	75-125			A-05

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

Dissolved Metals per EPA 200 Series Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
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Batch 1020443 - EPA 200/3005 Diss

Blank (1020443-BLK1)

Prepared: 02/15/01 Analyzed: 02/19/01

Arsenic	ND	0.00100	mg/l					
Manganese	ND	0.00200	"					
Zinc	ND	0.00500	"					

LCS (1020443-BS1)

Prepared & Analyzed: 02/15/01

Arsenic	0.114	0.00982	mg/l	0.100	114	85-115		
Manganese	0.102	0.00200	"	0.100	102	85-115		
Zinc	0.106	0.0491	"	0.100	106	85-115		

Duplicate (1020443-DUP1)

Source: P1A0753-22

Prepared & Analyzed: 02/15/01

Arsenic	0.00251	0.00100	mg/l	0.00224		11.4	20	
Manganese	0.0818	0.00200	"	0.0837		2.30	20	
Zinc	0.00849	0.00500	"	0.00967		13.0	20	

Matrix Spike (1020443-MS1)

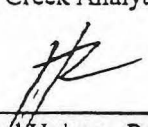
Source: P1A0753-22

Prepared & Analyzed: 02/15/01

Arsenic	0.121	0.0106	mg/l	0.100	ND	119	70-130	
Manganese	0.188	0.00200	"	0.100	0.0837	104	70-130	
Zinc	0.117	0.0532	"	0.100	ND	107	70-130	

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network

11 of 19

PG Associates, inc.
 7 S.E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

Conventional Chemistry Parameters per APHA/EPA Methods - Quality Control
North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1020399 - Wet Chem
Blank (1020399-BLK1) Prepared: 02/14/01 Analyzed: 02/19/01

Biochemical Oxygen Demand ND 4.00 mg/l

S (1020399-BS1) Prepared: 02/14/01 Analyzed: 02/19/01

Biochemical Oxygen Demand 166 4.00 mg/l 198 83.8 61.3-117

Duplicate (1020399-DUP1) Source: P1B0283-01 Prepared: 02/14/01 Analyzed: 02/19/01

Biochemical Oxygen Demand ND 4.00 mg/l ND 40

Batch 1020467 - Wet Chem
Blank (1020467-BLK1) Prepared & Analyzed: 02/15/01

Ammonia-Nitrogen ND 0.0500 mg/l

S (1020467-BS1) Prepared & Analyzed: 02/15/01

Ammonia-Nitrogen 2.04 0.0500 mg/l 2.00 102 85-115

Duplicate (1020467-DUP1) Source: P1B0324-01 Prepared & Analyzed: 02/15/01

Ammonia-Nitrogen ND 0.0500 mg/l ND 20

Matrix Spike (1020467-MS1) Source: P1B0324-01 Prepared & Analyzed: 02/15/01

Ammonia-Nitrogen 1.76 0.0500 mg/l 2.00 ND 88.0 75-125

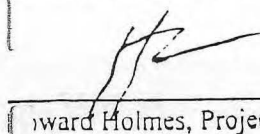
Matrix Spike Dup (1020467-MSD1) Source: P1B0324-01 Prepared & Analyzed: 02/15/01

Ammonia-Nitrogen 1.77 0.0500 mg/l 2.00 ND 88.5 75-125 0.567 20

Batch 1020468 - Wet Chem
Blank (1020468-BLK1) Prepared & Analyzed: 02/19/01

Total Organic Carbon ND 1.00 mg/l

North Creek Analytical - Portland

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.

 Edward Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network

12 of 19

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

Conventional Chemistry Parameters per APHA/USEPA Methods - Quality Control
North Creek Analytical - Portland

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

Batch 1020468 - Wet Chem
LCS (1020468-BS1)

Prepared & Analyzed: 02/19/01

Total Organic Carbon	21.3	1.00	mg/l	20.0	106	89.3-114
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Duplicate (1020468-DUP1)

Source: P1B0320-01

Prepared & Analyzed: 02/19/01

Total Organic Carbon	31.7	4.00	mg/l	32.8	3.4	20
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Matrix Spike (1020468-MS1)

Source: P1B0320-01

Prepared & Analyzed: 02/19/01

Total Organic Carbon	124	4.00	mg/l	100	32.8	91.2	70-130
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Batch 1020484 - Wet Chem
Blank (1020484-BLK1)

Prepared & Analyzed: 02/16/01

Chemical Oxygen Demand	ND	5.00	mg/l			
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LCS (1020484-BS1)

Prepared & Analyzed: 02/16/01

Chemical Oxygen Demand	29.6	5.00	mg/l	30.0	98.7	75-125
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Duplicate (1020484-DUP1)

Source: P1B0196-01

Prepared & Analyzed: 02/16/01

Chemical Oxygen Demand	8.47	5.00	mg/l	12.4	37.7	20	Q-06
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Batch 1020510 - Wet Chem
Blank (1020510-BLK1)

Prepared: 02/16/01 Analyzed: 02/17/01

Total Suspended Solids	ND	1.00	mg/l			
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LCS (1020510-BS1)

Prepared: 02/16/01 Analyzed: 02/17/01

Total Suspended Solids	53.0	10.0	mg/l	60.1	88.2	80-120
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North Creek Analytical - Portland

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Howard Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network



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 Bend 20022 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.382.1010 fax 541.382.7588

G Associates, Inc. Project: Tree Source Monitoring Wells
 537 S.E. Ash, #12 Project Number: 1613
 Portland, OR 97214 Project Manager: Jim Arnold
 Reported: 03/05/01 12:42

Conventional Chemistry Parameters per APHA/AIPL Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1020510 - Wet Chem									
Duplicate (1020510-DUP1)	Source: P1B0324-01		Prepared: 02/16/01		Analyzed: 02/17/01				
Total Suspended Solids	29.0	10.0	mg/l		28.0	80-120	3.51	20	
Batch 1020552 - Wet Chem									
Blank (1020552-BLK1) Prepared: 02/19/01 Analyzed: 02/20/01									
Total Dissolved Solids	ND	10.0	mg/l						
CS (1020552-CS1) Prepared: 02/19/01 Analyzed: 02/20/01									
Total Dissolved Solids	111	10.0	mg/l		101	80-120			
Duplicate (1020552-DUP1) Source: P1B0317-01 Prepared: 02/19/01 Analyzed: 02/20/01									
Total Dissolved Solids	2000	10.0	mg/l		2030		1.49	20	
Batch 1020534 - Wet Chem									
Blank (1020584-BLK1) Prepared: 02/20/01 Analyzed: 02/21/01									
Total Dissolved Solids	ND	10.0	mg/l						
CS (1020584-CS1) Prepared: 02/20/01 Analyzed: 02/21/01									
Total Dissolved Solids	93.0	10.0	mg/l		101	80-120			
Duplicate (1020584-DUP1) Source: P1B0382-01 Prepared: 02/20/01 Analyzed: 02/21/01									
Total Dissolved Solids	489	10.0	mg/l		464		5.25	20	
Batch 1020707 - Wet Chem									
Blank (1020707-BLK1) Prepared & Analyzed: 02/23/01									
Annins & Lignins	ND	0.250	mg/l						

North Creek Analytical - Portland

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Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

 Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

 Reported:
 03/05/01 12:42

Conventional Chemistry - Pesticides - PCBs/APEs - Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
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Batch 1020707 - Wet Chem

LCS (1020707-BS1)

Prepared & Analyzed: 02/23/01

Tannins & Lignins 1.99 0.250 mg/l 2.00 99.5 85-115

Duplicate (1020707-DUP1)

Source: P1B0324-01RE1 Prepared & Analyzed: 02/23/01

Tannins & Lignins ND 0.250 mg/l ND 20

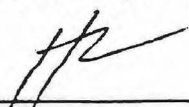
Matrix Spike (1020707-MS1)

Source: P1B0324-01RE1 Prepared & Analyzed: 02/23/01

Tannins & Lignins 2.10 0.250 mg/l 2.00 ND 105 75-125

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

 North Creek Analytical, Inc.
 Environmental Laboratory Network

PG Associates, Inc.
 537 S.E. Ash, #12
 Portland, OR 97214

Project: Tree Source Monitoring Wells
 Project Number: 1613
 Project Manager: Jim Arnold

Reported:
 03/05/01 12:42

Anions per EPA Method 300.0 - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	RPD	RPD Limit	Notes
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Batch 1020411 - Wet Chem

Blank (1020411-BLK1)				Prepared & Analyzed: 02/14/01					
Chloride	ND	0.500	mg/l						
Nitrate-Nitrogen	ND	0.100	"						
Nitrite-Nitrogen	ND	0.100	"						
Sulfate	ND	1.00	"						

CS (1020411-BS1)				Prepared & Analyzed: 02/14/01					
Chloride	10.2	0.500	mg/l	10.0	102	35-115			
Nitrate-Nitrogen	5.14	0.100	"	5.00	103	35-115			
Nitrite-Nitrogen	5.10	0.100	"	5.00	102	35-115			
Sulfate	30.5	1.00	"	30.0	102	85-115			

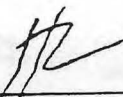
Duplicate (1020411-DUP1)				Source: P1B0324-01 Prepared & Analyzed: 02/14/01					
Chloride	22.1	0.500	mg/l	22.1			0.00	20	
Nitrate-Nitrogen	2.65	0.100	"	2.65			0.00	20	
Nitrite-Nitrogen	ND	0.100	"	ND				20	
Sulfate	13.2	1.00	"	13.2			0.00	20	

Matrix Spike (1020411-MS1)				Source: P1B0324-01 Prepared & Analyzed: 02/14/01					
Chloride	24.1	0.556	mg/l	2.22	22.1	90.1	75-125		
Nitrate-Nitrogen	4.92	0.111	"	2.22	2.65	102	75-125		
Nitrite-Nitrogen	2.14	0.111	"	2.22	ND	96.4	75-125		
Sulfate	17.6	1.11	"	4.44	13.2	99.1	75-125		

Matrix Spike Dup (1020411-MSD1)				Source: P1B0324-01 Prepared & Analyzed: 02/14/01					
Chloride	24.1	0.556	mg/l	2.22	22.1	90.1	75-125	0.00	20
Nitrate-Nitrogen	4.93	0.111	"	2.22	2.65	103	75-125	0.203	20
Nitrite-Nitrogen	2.14	0.111	"	2.22	ND	96.4	75-125	0.00	20
Sulfate	17.6	1.11	"	4.44	13.2	99.1	75-125	0.00	20

North Creek Analytical - Portland

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 Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
537 S.E. Ash, #12
Portland, OR 97214

Project: Tree Source Monitoring Wells
Project Number: 1613
Project Manager: Jim Arnold

Reported:
03/05/01 12:42

Microbiological Parameters per APHA Standard Methods - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	REC Limits	RPD	RPD Limit	Notes
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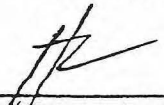
Batch 1020398 - Aqueous Micro

Blank (1020398-BLK1) Prepared: 02/14/01 Analyzed: 02/15/01

Fecal Coliforms ND 2.00 MPN/100 ml

North Creek Analytical - Portland

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Howard Holmes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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 503.905.9200 Fax 503.906.9210
 Bend 10332 Emoire Avenue, Suite 5-1, Bend, OR 97701-5711
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LPG Associates, Inc. Project: Tree Source Monitoring Wells
 537 S.E. Ash, #12 Project Number: 1613
 Portland, OR 97214 Project Manager: Jim Arnold
 Reported: 03/05/01 12:42

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1B26034 - General Preparation										
Blank (1B26034-BLK1) Prepared & Analyzed: 02/23/01										
Total Organic Halides	ND	0.0200	mg/l							
Blank (1B26034-BLK2) Prepared & Analyzed: 02/26/01										
Total Organic Halides	ND	0.0200	mg/l							
LCS (1B26034-BS1) Prepared & Analyzed: 02/23/01										
Total Organic Halides	0.0978	0.0200	mg/l	0.100		97.3	84-118			
LCS (1B26034-BS2) Prepared & Analyzed: 02/26/01										
Total Organic Halides	0.0945	0.0200	mg/l	0.100		94.5	84-118			
LCS Dup (1B26034-BSD2) Prepared & Analyzed: 02/26/01										
Total Organic Halides	0.0996	0.0200	mg/l	0.100		99.6	84-118	5.26	17	
Duplicate (1B26034-DUP1) Source: P1B0324-01 Prepared & Analyzed: 02/23/01										
Total Organic Halides	ND	0.0200	mg/l		ND				15	
Duplicate (1B26034-DUP2) Source: P1B0324-02 Prepared & Analyzed: 02/23/01										
Total Organic Halides	ND	0.0200	mg/l		ND				15	
Duplicate (1B26034-DUP3) Source: P1B0324-03 Prepared & Analyzed: 02/26/01										
Total Organic Halides	0.449	0.200	mg/l		0.297			40.8	15	Q-14
Matrix Spike (1B26034-MS1) Source: P1B0324-03 Prepared & Analyzed: 02/26/01										
Total Organic Halides	1.21	0.200	mg/l	0.500	0.297	183	80-120			Q-14

North Creek Analytical - Portland

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Howard Holmes, Project Manager

North Creek Analytical, Inc.
 Environmental Laboratory Network

LPG Associates, Inc.
537 S.E. Ash, #12
Portland, OR 97214

Project: Tree Source Monitoring Wells
Project Number: 1613
Project Manager: Jim Arnold

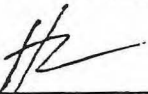
Reported:
03/05/01 12:42

Notes and Definitions

- A-05 Sample wasn't spiked.
- Q-06 Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.
- Q-14 Visual examination indicates the RPD and/or matrix spike recovery is outside the control limit due to a non-homogeneous sample matrix.
- 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. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis
- RPD Relative Percent Difference

North Creek Analytical - Portland

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Howard Holmes, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

115 0324

Sample Transmittal

Project Name: TREE SOURCE
 Date: 2/13/01
 Laboratory: NCA
 Results Due: NORMAL TAT
 Contact: JIM ARNOLD

Project Number: 1613 Page: 1/2
 Analysis Requested

Sample Information					Container Information																			
Identification	Date	Type	Size	Quantity	NUTRIENT	DISSOLVED	ARSENIC	DISSOLVED	IC	DISSOLVED	MANGANESE	DISSOLVED	ZINC	CHLORIDE	SULFATE	NITRATE-N	NITRITE-N	AMMONIA-N	BOD	COD				
1W-1	2/13/01	G	1L	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
		P	1L	1																				
		P	250ml	1																				
		P	250ml	1																				
1W-2		P	150ml	1																				
		G	1L	1																				
		P	1L	1																				
		P	150ml	1																				
1W-3		P	250ml	1																				
		P	150ml	1																				
		G	1L	1																				
		P	1L	1																				
1W-3		P	500ml	1																				
		P	250ml	1																				
		P	150ml	1																				
		P	150ml	1																				

Comments: Match containers to analysis. Billing directed to Glen Patrick at Tree Source.

CHAIN OF CUSTODY

Relinquished by:	Date/Time	Received by:	Date/Time
<u>James J. Arnold</u>	<u>2/13/01 4:32 PM</u>	<u>Jim Arnold</u>	<u>2/13/01 10:30</u>

Sample Transmittal

Project Name: TREE SOURCE

Project Number: 1613

Page: 2/2

Date: 2/13/01

Analysis Requested

Laboratory: NCA

Results Due: NORMAL TAT

LPG Contact: JIM ARNO

Sample Information		Container Information			TOC	TOX	TDS	TSS	Tannins/Lignins	Fecal Coliform
Identification	Date	Type	Size	Quantity						
MW-1	2/13/01	G	1L		X	X	X	X	X	X
		P	1L							
		P	500L							
		P	250L							
✓		P	150L							
MW-2		G	1L							
		P	1L							
		P	500L							
		P	250L							
✓		P	150L							
MW-3		G	1L							
		P	1L							
		P	500L							
		P	250L							
✓	✓	P	150L		✓	✓	✓	✓	✓	✓

Comments: Match containers to analysis. Billing directed to Glen Patrick at Tree Source.

CHAIN OF CUSTODY

Relinquished by:	Date/Time	Received by:	Date/Time
<i>James J. Cella</i>	2/13/01 4:37 PM	<i>Sarah Passerelle</i>	2/13/01 (1631)