1832 W Cascade, Hood River, OR 97031 Phone 541.387.4422 Portland 503.977.2401





October 4, 2002

Mr. Don Williams 39801 S.E. Kitzmiller Eagle Creek, Oregon 97022

Subject:

Ground Water Monitoring and Sampling - October 2002

Meadowbrook Grocery 16845 S. Highway 211 Molalla, Oregon OC1 - 8 5005

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Dear Mr. Williams:

This report presents the results of ground water monitoring and sampling activities performed at the Meadowbrook Grocery facility located at 16845 S. Highway 211, Molalla, Oregon in October 2002, by Martin S. Burck Associates Inc. (MSBA).

INTRODUCTION

The Meadowbrook Grocery site, owned by Don Williams, consists of an active automobile refueling station and grocery store. The legal description of the site location is Clackamas County, Tax Lot No. 800; Township 5S, Range 3E, Section 2. The site location is illustrated on Figure 1. The site features including a grocery store, pump island, former tanks, and three ground water monitoring wells are illustrated on Figure 2.

GROUND WATER LEVEL MONITORING AND SAMPLING

The general scope of work consisted of measuring ground water levels in each of the monitoring wells (MW-1, MW-2, and MW-3) and collecting a ground water sample from each of the wells for laboratory analysis. Monitoring and sampling activities were performed in general accordance with the Field Methods and Procedures presented in Attachment A. The ground water monitoring and sampling activities were performed at the site on October 1, 2002.

Ground Water Level Data Summary

The depth to ground water measured below the top of casing (TOC) in monitoring well MW-1 was 5.03 feet, MW-2 was 5.63 feet, and MW-3 was 5.92 feet. The depth to water measured in each of the wells is summarized in Table 1.

Ground Water Analytical Data Summary

Ground water samples were collected from monitoring wells MW-1, MW-2, and MW-3 for laboratory analysis of benzene, toluene, ethylbenzene, xylenes, 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), naphthalene, 1,2,4-trimethylbenzene (124-TMB), 1,3,5-trimethylbenzene (135-TMB), isopropylbenzene (IPB), and n-propylbenzene (NPB) using EPA method 8260B. The ground water samples were also analyzed for dissolved lead using EPA method 6020. The ground water sample analytical data are summarized in Table 1 and are presented below.

- Benzene was not detected in well MW-1 and was detected in wells MW-2 and MW-3 at concentrations of 7.25 parts per billion (ppb) and 0.79 ppb, respectively.
- <u>Toluene</u> was not detected in wells MW-1 and MW-3 and was detected in well MW-2 at a concentration of 1.52 ppb.
- Ethylbenzene was detected in wells MW-1, MW-2, and MW-3 at concentrations of 32.4 ppb, 98.9 ppb and 2.67 ppb, respectively.
- Xylene was detected in wells MW-1, MW-2, and MW-3 at concentrations of 17.8 ppb, 282 ppb, and 1.90 ppb, respectively.
- EDB, EDC, and MTBE were not detected in any of the wells.
- Naphthalene was not detected in well MW-3 and was detected in wells MW-1 and MW-2 at concentrations of 27.2 ppb and 44.7 ppb, respectively.
- 124-TMB was detected in wells MW-1, MW-2, and MW-3 at concentrations of 77.2 ppb, 173 ppb, and 2.21 ppb, respectively.
- 135-TMB was detected in wells MW-1, MW-2, and MW-3 at concentrations of 44.9 ppb, 36.5 ppb, and 0.53 ppb, respectively.
- <u>IPB</u> was not detected in well MW-3 and was detected in wells MW-1 and MW-2 at concentrations of 13.8 ppb and 15.1 ppb, respectively.
- NPB was detected in wells MW-1, MW-2, and MW-3 at concentrations of 59.4 ppb, 35.9 ppb, and 2.28 ppb, respectively.
- <u>Dissolved lead</u> was detected in wells MW-1, MW-2, and MW-3 at concentrations of 2.10 ppb, 1.11 ppb, and 1.10 ppb, respectively.

A copy of the ground water sample laboratory report is presented in Attachment 2 and copies of the ground water purge and sample data are presented in Attachment 3.

REMARKS AND SIGNATURES

The information/conclusions/recommendations/proposals contained in this report were arrived at in accordance with currently accepted professional hydrogeologic and environmental practices at this time and location. No warranties are expressed or implied. This report was prepared solely for Mr. Don Williams and MSBA is not responsible for the independent conclusions or actions of others derived from the information presented herein.

Information and opinions presented in this report are based on the collection and review of data from limited portions of the site subsurface. MSBA is not responsible for conditions that may exist in portions of the site that were not investigated; for conditions that were not reported or properly presented to MSBA; and for future activities or investigations that may alter the current condition or understanding of the site.

Prepared by:

MARTIN S. BURCK ASSOCIATES, INC.

Michael Deely

Environmental Scientist

Reviewed By:

Martin S. Burck, RG

Registered Geologist

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enc:

Figure 1:

Site Location Map

Figure 2:

Site Features and Well Location Map

Table 1:

Ground Water Sample Analytical Data and Depth to Water

Attachment 1:

Field Methods and Procedures

Attachment 2:

Ground Water Sample Laboratory Report

Attachment 3:

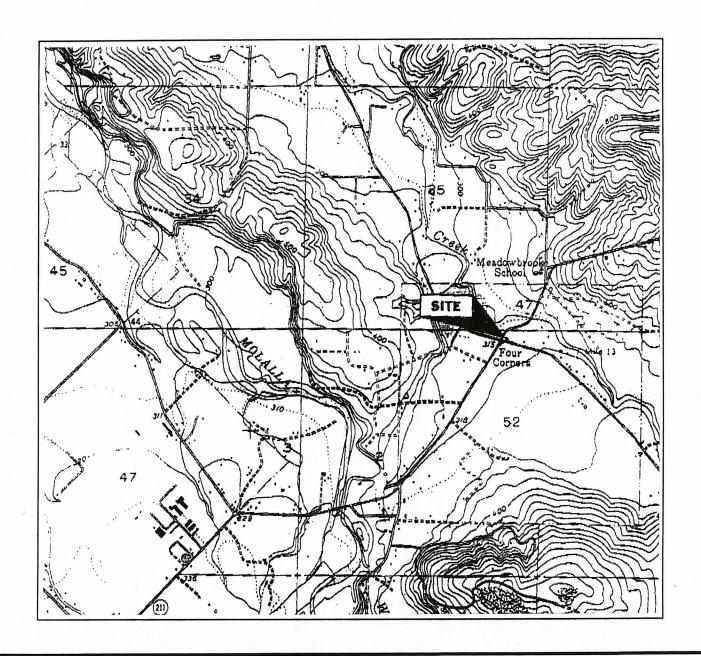
Ground Water Purge and Sample Data

Martin S. Burck Associates, Inc. October 4, 2002

Meadowbrook Grocery

Page 3 Ground Water Monitoring and Sampling (10/1/02)

Figure 1 Site Location Map Figure 2 Site Features Map



Scale 1:24,000 Contour Interval 20 Feet Dotted Lines Represent 10-Foot Contours National Geodetic Vertical Datum of 1929

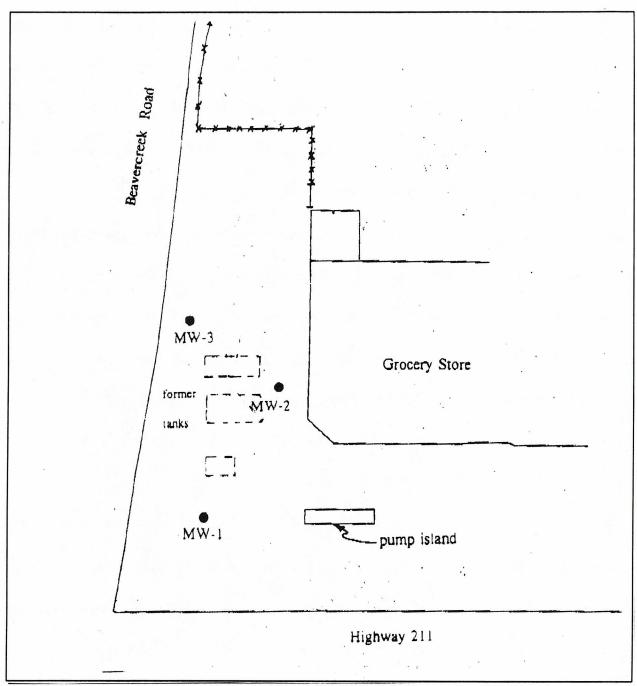




FIGURE 1

SITE LOCATION MAP

Meadowbrook Grocery 16845 S. Highway 211 Molalla, Oregon



Adapted from Report Prepared by Others





LEGEND

MW-1 ● Ground Water Monitoring Well and Label
Former Tank Location Outlines



FIGURE 2

SITE FEATURES MAP

Meadowbrook Grocery 16845 S. Highway 211, Molalla, Oregon Table 1 Ground Water Sample Analytical Data and Depth to Water

TABLE 1 GROUND WATER SAMPLE ANALYTICAL DATA AND DEPTH TO WATER

Meadowbrook Grocery

16845 S. Highway 211, Molalla, Oregon

Well ID	Depth to Water ^a	Date	Benzene ^b (ppb) ^d	Toluene ^b (ppb)	Ethyl- benzene ^b (ppb)	Xylenes ^b (ppb)	EDB ^b (ppb)	EDC ^b (ppb)	MTBE ^b (ppb)	124- TMB ^b (ppb)	135- TMB ^b (ppb)	IPB ^b (ppb)	NPB ^b (ppb)	Naph- thalene ^b (ppb)	Lead ^c (ppb)
MW-1	5.03	10/1/02	ND ^e	ND	32.4	17.8	ND	ND	ND	77.2	44.9	13.8	59.4	27.2	2.10
MW-2	5.63	10/1/02	7.25	1.52	98.9	282	ND	ND	ND	173	36.5	15.1	35.9	44.7	1.11
MW-3	5.92	10/1/02	.79	ND	2.67	1.90	ND	ND	ND	2.21	0.53	ND	2.28	ND	1.10

a Depth to ground water measured in feet from the top of each well casing to the ground water surface.

Benzene, toluene, ethylbenzene, xylenes, 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), 1,2,4-trimethylbenzene (124-TMB), 1,3,5-trimethylbenzene (135-TMB), isopropylbenzene (IPB), n-propylbenzene (NPB), and naphthalene analyzed using EPA method 8260B.

Dissolved lead analyzed using EPA method 6020.

d Numeric analytical results reported in parts per billion (ppb).

Not detected (nd).

Attachment 1

Field Methods and Procedures

FIELD METHODS AND PROCEDURES

The following section presents the general field methods and procedures that were utilized to complete field activities. These activities included collecting and preserving ground water samples for laboratory analysis. Ground water samples were collected, preserved, transported, and analyzed in general accordance with DEQ methodology as presented in OAR 340-122-345 "Sample Collection Methods," and OAR 340-122-218 "Required Analytical Methods." If not specified by current DEQ regulations, sampling and analytical methods were implemented in general accordance with EPA protocol.

Ground Water Level Monitoring

The top of each well casing is surveyed to within plus or minus (+/-) 0.01-foot relative to a common temporary benchmark. A temporary benchmark was designated with an assumed elevation relative to the approximate surface elevation above mean sea level (msl). The surveyed locations are marked on each casing for future reference and measuring. The purpose of the survey is to allow correlation of measured ground water levels between each of the wells at the site.

The depth to ground water (water level) was measured with an electronic, hand-held, water level indicator. The probe of the indicator is lowered in the well until contact with ground water completes a circuit causing a buzzer and light to activate. The depth to water, measured from the top of the well casing, is read directly from a graduated cord attached to the probe with marked increments of 0.01-foot.

Ground Water Purging and Sampling

Prior to collecting the sample for laboratory analysis, ground water is purged from the well with a bailer. The well is purged to remove potentially stagnant ground water and allow the surrounding formation water to enter the well for sampling. Three to six well volumes are generally required to achieve this objective. The ground water temperature and conductivity were monitored after each well volume was purged. When the final readings were within ten percent of the previous readings for these parameters, following the removal of a minimum of three well volumes, the sample was collected for laboratory analyses.

After purging, a sample is collected when the water level in the well has recharged to within 85 percent of the initial static water level. If the desired amount of recharge is not achieved within a period of 60 minutes, the sample is collected and the water level is recorded.

The sample is collected from the well with a bailer designed to reduce the loss of volatile components. The water was collected from the well by lowering the bailer below the ground water interface and retrieving the bailer with the water contained inside. The water was transferred into two identical 40 mL glass VOA vials with septum lids provided by the laboratory. The glass jars contained 2-5 drops of dilute HCL as a preservative to increase the sample hold time to 14 days. The water was transferred to the glass jars with as little agitation as possible and immediately sealed with the Teflon-lined septum lids. The sample jars were filled so that no headspace was present at the time of collection to help prevent the potential loss of volatiles.

After the samples were properly sealed, they were placed immediately in an ice chest with ice and maintained at a temperature of 4 degrees C or 39 degrees F until being prepared by the laboratory for analysis.

Chain-of-Custody and Labeling

The Chain-of-Custody (COC) is a form that documents the custody of a sample from the time of origin to the time of disposal or destruction. A COC was initiated in the field at the time the samples were collected. The sampler documents such information as the time, date, type of sample, requested analyses. Any individual in custody of the samples, including the laboratory, is required to document the transfer of custody (beginning with the sampler) by signing the COC (including date and time of transfer).

A label was affixed to each sample container designating the sample number, and other critical information including: project name, location, date, time, sampler name. After receiving the samples the laboratory assigns a unique number to each discrete sample for reference and verification.

Equipment Decontamination

Equipment used to collect ground water samples such as: bailers, water level indicators, etc., are decontaminated prior to each use. Strict decontamination procedures are utilized to help eliminate the potential for cross-contamination between samples and sample locations. The decontamination procedure utilized at this site included a thorough washing in TSP or Alconox detergent followed by two rinses in tap water and a third and final rinse using deionized water. If time permitted, the sampling equipment was allowed to air dry.

Disposable latex gloves were worn during sampling to help eliminate the potential for cross-contamination by the sampler. The gloves were discarded after each sample event and a new pair was utilized for each subsequent sampling event.

Attachment 2

Ground Water Sample Laboratory Report



#25.A2U.92UD 14A 42.5.72U.91 East 11115 Montgomery, Suite B, Spokane, WA 99205-4776 509.924.9200 fax 909.924.9290 9405 SW Nimbus Avenue, Braverton, 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

Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook

Project Number: none Project Manager: Marty Burck

Reported: 10/03/02 15:21

Analytical report for samples

			Date Sampled	Date Received
	Laboratory ID	Matrix		10/01/02 13:05
Sample ID	P2J0039-01	Water	10/01/02 11/05	100 10.05
MW-1	P2J0039-02	Water	10/01/02 11:55	
MW-2		Water	10/01/02 11:26	10/01/02 13:05
MW-3	P2J0039-03	YY BLOI		

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Philip Nerenberg, Laboratory Manager

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Page 1 of 8



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20332 Empire Avanue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7568

Martin S. Burck Associates 1832 W. Cascade

Hood River, OR 97031

Project: Meadowbrook

Project Number: none

Project Manager: Marty Burck

Reported: 10/03/02 15:21

Dissolved Metals per EPA 6000/7000 Series Methods

North Creek Analytical - Portland

	Nor	th Creek	Analyt	cai - Ft	JI GAIIG				
	Result	Reporting Limit	Units	Dilution		Prepared	Analyzed	Batch	Notes
Analyte				, , , , , , , , , , , , , , , , , , , ,	Sampled: 10/0	1/02 Rece	ived: 10/01/0	02	
MW-1 (P2J0039-01) Water	4.00310	0.00100	mg/l	1	EPA 6020	10/02/02	10/03/02	2100076	
Lead	0.00210	0.00100			Sampled: 10/0	01/02 Rece	ived: 10/01/	02	
MW-2 (P2J0039-02) Water	0.00111	0.00100	mg/l	1	EPA 6020	10/02/02	10/03/02	2100076	
Lead					Sampled: 10/	01/02 Rec	eived: 10/01.	/02	
MW-3 (P2J0039-03) Water Lead	0.00110	0.00100	mg/l	1	BPA 6020	10/02/02	10/03/02	2100076	

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Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook

Project Number: none

Project Manager: Marty Burck

Reported: 10/03/02 15:21

Selected Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

	Result	Reporting	Units	Dilution	Method	Propared	Analyzed	Batch	Notes
Analyle					Sampled: 10/01	/02 Recei	ved: 10/01/	02	
1W-1 (P2J0039-01) Water				1	EPA 8260B	10/02/02	10/02/02	2100054	
,2-Dibromoethane	ND	0.500	ug/I	,	*	*		"	
,2-Dichloroethane	ND	0.500		u	M	11	#	и	
	ND	0.500			**	н		н	
Benzene	ND	0.500	•	,,	**	н			
Toluene	32.4	0.500	•					н	
Ethylbenzene	17.8	1.00	•	. "				•	
(yienes (total)	ND	2.00	"			и		n	
Methyl tert-butyl ether	27.2	2:00	и	"	· ·		M	,,	
Naphthalene	77.2	1.00	•		•		н		
1,2,4-Trimethylbenzene	44.9	0.500	и	"				н	
1,3,5-Trimethylbenzene	13.8	2.00	н	*			.,	tı .	
Isopropylbenzene	59.4	0.500		u	11				
n-Propylbenzene									
Surr: 4-BFB	102 %	84.5-124							
Surr: 1.2-DCA-d4	99.0 %	77.9-123							
Surr: Dibromosluoromethane	100 %	83.5-119							
Surr: Dibromojiuoromamano	101%	84.1-116							
Surr: Tohiene-d8					Sampled: 10/6	NUMA Rec	eived: 10/01	1/02	
(D4 10070 02) Woter							10/02/02	2100054	
MW-2 (P2J0039-02) Water	ND	0.500	ug/l	1	EPA 8260B	10/02/02	10/02/02	2100004	
1,2-Dibromoethane	ND	0.500	"					,	
1,2-Dichloroethane		0.500		**	11			,,	
Benzene	7.25	0.500	•	,,		н	11		
Toluene	1.52		**		"			-	
Ethylbenzene	98.9	0.500		,,	n	•	u	"	
Xylenes (total)	282	1.00	.,					"	
Methyl tert-butyl ether	ND	2.00			17		n	"	
	44.7	2.00					×	11	
Naphthalené	173	1.00			,		н		
1,2,4-'Trimethylbenzene	36.5	0.500	"		n	**	н	n	
1,3,5-Trimethylbenzene	15.1	2.00		•			н	H	
Isopropyibenzene	35.9	0.500	н	н					
(30)10) 15 15 15	33.7								
n-Propylbenzene		84 5-174	1						
n-Propylbenzene Surr: 4-BFB	102 %	84.5-124							
n-Propylbenzene Surr: 4-BFB Surr: 1,2-DCA-d4	102 % 101 %	77.9-123	dia .						
n-Propylbenzene	102 %								

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Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook Project Number: none Project Manager: Marty Burck

Reported: 10/03/02 15:21

Selected Volatile Organic Compounds per EPA Method 8260B

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	Nort	h Creek A	Inalyt	icai - Fo	Luand				
	Rosult	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
Analyte	Kesun				Sampled: 10/0	1/02 Rece	ived: 10/01/	02	
MW-3 (P2J0039-03) Water		0.500		1	EPA 8260B	10/02/02	10/02/02	2100054	
1,2-Dibromoethane	ND	0.500	ug∕l	,				. "	
1,2-Dichloroethane	ND	0.500		11	н	10	н		
	0.790	0.500				n	и	U	
Benzene	ND	0.500	.,		w w		11	11	
Toluene	2.67	0.500			•		"		
Ethylbenzene Volones (total)	1.90	1.00					**		
Xylenes (total) Methyl tert-butyl ether	ND	2.00			**				
	ND	2.00				н	*	*	
Naphthalene	2.21	1.00				19	н		
1,2,4-Trimethylbenzene	0.530	0.500	**			•			
1,3,5-Trimethylbenzene	ND	2.00				,	**	•	
Isopropylbenzene	2.28	0.500				<u></u>			
n-Propylbenzene	102 %	84.5-124							
Surr: 4-BFB	100 %	77.9-123							
Surr: 1,2-DCA-d4	102 %	83.5-119							
Surr: Dibromofluoromethane Surr: Toluene-d8	102 %	84.1-116							

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Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook

Project Number: none Project Manager: Marty Burck

Reported: 10/03/02 15:21

Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
			1. 10/02/0	2 Analyz	ed: 10/03/	02		
		Prepare	1: 10/02/0	2 Adding-				
0.00100	mg/l		4 40/00/6	Analyz	ed: 10/03/	02		
			d: 10/02/0	98.7	80-120			
0.00100	mg√l	0.100	5			/O2		
rce: P2J00	16-01	Prepare		2 Analyz	zed: 10/03/	V.	20	
0.00100	mg/l		מא		9	/0.0		
irce: P2J00	26-01	Prepare	d: 10/02/	02 Analy	zed: 10/03	/02		
0.00100	mg/l	0.100	NĎ	97.2	75-125			
potos	R9_01	Prepar	ed: 10/02/	02 Analy	zed: 10/03	/02		
	mg/l	0.100	ND	94.0	75-125			
l	0.00100	0.00100 mg/l	urce: 1210000	urce. 122000 ND	WICE: 121000 ND 94.0	MD 94.0 75-125		0100 ND 94.0 75-125

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Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook

Project Number: none Project Manager: Marty Burck

Reported: 10/03/02 15:21

	North	Creek A	Analyti	cal - rol	Hand		%REC		RPD	
and a second	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
nalyte										
atch 2100054 - EPA 5030B				Dranarad	& Analy	zed: 10/02	/02			
Slank (2100054-BLK1)		0.500	ug/l	Frepared	- / LIMI					
,2-Dibromoethane	ND	0.500	u 87 .							
,2-Dichloroethane	NO									
Benzene	ND	0.500	11							
Tolucne	ND	0.500	u							
Phylogramie	ND	0.500								
xylenes (total)	ND	1.00								
Methyl teri-butyl ether	ON	2.00	,,							
Naphthalene	ND	2.00								
1,2,4-Trimethylbenzene	ND	1.00	,							
1,3,5-Trimethylbenzene	ND	0.500								
	ND	2.00								
Isopropylbenzenc	ND	0.500	h				046 131			
n-Propyibenzene	19.7		"	20.0		98.5	84.5-124			
Surr: 4-BFB	20.5			20.0		102	77.9-123			
Surr: 1,2-DCA-d4			u	20.0		102	83.5-119			
Surr: Dibromcfluoromethane	20.4		u	20.0		102	84.1-116			
Surr: Toluene-d8	20.4						2/02			
					d & Ana	lyzed: 10/0	80-125			
LCS (2100054-BS1)	19.4	0.500	ug/l	20.0		97.0	80-125			
Benzene	19.3	0.500	.0	20.0		96.5				
Toluene	19.0	0.500		20.0		95.0	80-125			
Ethylbenzene	57.8	1.00	н	60.0	X _{III}	96.3	80-125			
Xylenes (total)		,	<i>u</i>	20.0		98.0	84.5-124			
Surr: 4-BFB	19.6		"	20.0		102	77.9-123			
Surr: 1,2-DCA-d4	20.4			20.0		104	83.5-119	1		
Surr: Dibromofluoromethane	20.9		,,	20.0		104	84.1-116	í		
Surr: Toluene-d8	20.7									
	80	urce: P2J0	15-01	Ртераг	ed & An	alyzed: 10/	02/02			
Matrix Spike (2100054-MS1)	20.8	0.500		20.0	סא	104	80-125			
Benzene	20.8	0.500	100	20.0	מא	104	80-125			
Toluene	20.9	0.500		20.0	ND	104	80-125			
Ethylbenzene		1.00	100	60.0	ND	106	80-125			
Xylencs (total)	63.8	1,00				98.5	84.5-124	4		200
Swr: 4-BFB	19.7			20.0		102	77.9-12.			
Surr: 1,2-DCA-d4	20.4		,	20.0		106	83.5-11			
Surr: Dibromofluoromethane	21.3			20.0		103	84.1-11			
Surr: Dioromojiuoromemane			"	20.0		103	04.1-11	•		

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20.0

20.6



Surr: Dibromofluoromethane

Surr: Toluene-d8

30.7

20.8

20.3



425.420.9200 fax 425.420.9210
East 11115 Montgomary, Suita B, Spokana, WA 99205-4776
509.924.9200 fax 509.924.8280
9405 SW Nimous Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 903.906.9210
20332 Empire Avenue, Suita F-1, Bend, OR 97701-5711
541.383.8310 fax 541.382,7588

Portland

83.5-119

84.1-116

104

102

Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Surr: 4-BFB

Surr: 1,2-DCA-d4

Surr: Toluene-d8

Surr: Dibromofluoromethane

Project: Meadowbrook

Project Number: none

Project Manager: Marty Burck

Reported: 10/03/02 15:21

Hood River, OR 97031	Nor	th Creek	Analyt	ical - Po			%REC		RPD	
Analyte	Resuit	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Batch 2100054 - EPA 5030B	So	urce: P2J001	5-01	-	ed & Analy	zed: 10/0	2/02 80-125	2.93	25	
Matrix Spike Dup (2100054-MSD1)	20.2	0.500	ug∕\ "	20.0 20.0	ND ND	100	80-125	3.92 2.42	25 25	
oluene	20.0 20.4	0.500		20.0 60.0	ND ND	102	80-125 80-125	1.42	25	
Ethylbenzene		1.00								

20.0

20.0

20.0

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.

Philip Nerenberg, Laboratory Manager

North Creek Analytical, Inc. Environmental Laboratory Network Page 7 of 8



Martin S. Burck Associates 1832 W. Cascade Hood River, OR 97031

Project: Meadowbrook

Project Number: none Project Manager: Marty Burck

Reported: 10/03/02 15:21

Notes and Definitions

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 (as received)

RPD

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.





COC K5V 3(99)

Hast 11115 Montgomery, Suite B, Spokane, WA 99206-4776 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-1132

(509) 924-9200 (503) 906-9200

FAX 924-9290 FAX 906-9210

North Creak Analysical, Inc. Environmental Laboratory Network				~ ~ ~ ~	c no	203	is S.W. N 32 Empir	c Aven	uc, Suite	F-1, Bon	d, OR 9	7101-3311	(541) 383	1-9310 FAX 382-75	
www.п.совобысаш CHA	INO	F CU	STOD						YYOI	rk U	ruei	TURNA	ROUND R	EQUEST in Business	s Days*
JENT: MSBA			INVOIC										Organic (k Inorganic Analyses	1 <
ALANTH DURCK				4-(SAM	E						10 7	5		
1822 ID. CASEABE NO							-					STD.		Hydrocarbon Analyses 3 2 1	< 1
Good KINEL 1	541-38	7-481	3 P.O. NU	MBER:	MEAD	owile	OOK				77 - 10	STE	<u>.</u>	Please Specify	
HONE: 541-387-4422 FAX: STROJECT NAME: MCO. ADD DOOK			1	REQUI	STEDA	NALYSI	35		T		一		OTHE	R	
PROJECT NUMBER:	12+	Q Y	1		1			£				*Firmare	und Requests le	ss than sondard may incur Ru	
SAMPLED BY: M SEELU	184	3									t	MATRIX	#OF		7
CLIENT SAMPLE SAMPLING	Z B	755										(W, S, O)	CONT.	COMMENTS	
IDENTIFICATION DATE/TIME		A	-			+	1					W	5		_
1. MW-1 10/102 113	9 X	X	-	-	-	-	+	-	1			W	5		
2 MW-Z 115	5 x	X			_	+	+	+	+	1		w	5		
3. MW-3 112	K X	X		-	-+	+	+	+	+-	+					
3.						\dashv	-	+		+					
4.		1			_	_	_	+-	-	+-	-				
3.							_	4-		+-	1		1	/	
6.								4-	+	+-	+-		+		
7.							\perp	-	_	-	-	-			
8.											-	-	-		
9.	1.							\perp	\bot				+-	-	140
10.								1.6			1			-	
11.	-	1										1		-	
12.	-	+						=				1			
13.	+					1									
14.	-							T							DAT
15.			D4	TE: 10	102	RECEIV	ED BY	1	1	16	UC	ellose			DAI
RELINQUISHED BY: Medael Seek	RM: WS	BA	17)	4E: 12	23	PRINT	NAME	6	1	4	110		RM:		DAT
PRINT NAME:	Trans.		DA	TE:	_		VED BY:	2	2	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	رال ا	ج ۱۰	(RM: D	Send 3.7	TIA
PRINT NAME ALLINE F	IRM:	rfue	TI	ME 3	T	1,KIMI	NAME	111	1)(TEMP	4

Attachment 3

Ground Water Purge and Sample Data

1832 W. Cascade Ave, Hood River, OR 97031 Phone: (541) 387-4422, Ptld: (503) 977-2401



GROUND WATER LEVEL DATA

Project <u>:</u>	Meadowbr	Meadowbrook Grocery, 16845 S. HWY 211, Molalla, OR										
Date:	10/1/02	Measured By:	MPD		-							

Well No.	Time	Ref. Elev.	DTW	Comments
MW-3	1009	NA	5.92	
M m - 1	10 10	NA	5.03	
NW-2	1012	AN	5.63	
<				
1 4/2 34 fi				

1832 W. Cascade Ave, Hood River, OR 97031 Phone: (541) 387-4422, Ptld: (503) 977-2401



GROUND WATER PURGE & SAMPLE DATA

Duningt	Meadowbro	ook Grocery	, 16845 S. H\	WY 211,	Molalla, (OR	Sample Order (2)
Project:							
Date: 10	1,102	Samp	led By:	or PB			
		MOM	NITORING W	ELL INF	ORMATI	ON	
Well Numb	er MW-	1	Seneral Locat	tion: we	LL BOX	UNDER	2 sq Diam. plate
Well Diame	eter (in)2	. To	otal Depth (ft)	14		Depth Wate	to Ground r (ft)
Wetted Cas Length (ft)	sing 897	One Vol	e Well ume (gals)	2" Well =	1.52 0.17 gal	/foot 4	" Well = 0.66 gal/foot
No. of Well	Volumes 3		Total Pu	rge Volui	me (gals)	4.5	57~4.5
			/ELOPMENT				
Time	Depth to Water	Gallons Purged	Cumulative Total	T	C	рН	Comments
10 46	5.03	0	0				STARTED PURGE
10 49		1.5	1.5	64.2	2009		well vol.
10 53		1.5	3.0	64.1	2900		well vol.
10 57	6.85	1.5	4.5	63.8	2890		WELL VOL STOPPED PUR
11 39	5.06	0	4.5	Slight	PHC	ODOR	COLLECTED SAMPLE
× 8,1%		- Al-1					
Comments	s: ≥ 85% statio	water colu	mn≤6.37f	eet depth	to water		
Collection	Γime ·\\	GROUN 39	ND WATER S Appearar	□ c	INFORM lear loudy urbid	Therr	mal Ice Chest & Ice
Containers	(3) 40 ml VO	Preserv	er Amber(【) 500 ml F		uested	EPA 8021B EPA 8260B
Comments	HCL HCL	П	Slight	PHC	ODOR		

1832 W. Cascade Ave, Hood River, OR 97031 Phone: (541) 387-4422, Ptld: (503) 977-2401



GROUND WATER PURGE & SAMPLE DATA

							Sample Order (🥕)					
	Meadowbro					OR						
Date: 10 1 0 2 Sampled By: MPD												
MONITORING WELL INFORMATION												
Well Number MW-2 General Location: IN PARK SPOT NEXT TO STORE												
Well Diameter (in) 2 Total Depth (ft) 15 Depth to Ground Water (ft) 5-63												
Wetted Casing Length (ft) 9.37 One Well Volume (gals) 1.59 2" Well = 0.17 gal/foot 4" Well = 0.66 gal/foot												
No. of Well Volumes to Purge Total Purge Volume (gals)4.78 ~ 5												
WELL DEVELOPMENT/PURGING INFORMATION												
Time	Depth to Water	Gallons Purged	Cumulative Total		C	рΗ	Comments					
11 02	5.63	0	0				STARTED PURGE					
1106		1.5	1.5	63	2540		well vol					
11 09		1.5	3.0	62.9	2380		well vol					
11 13	8.20	2.0	5.0	63	2460		well us (STOPPED PURG					
1155	5.45	0	5.0	slight	PHC	DOR	COLLECTED SAMPLE					
				3								
Comments: ≥ 85% static water column ≤ 7, o 3 feet depth to water												
GROUND WATER SAMPLE INFORMATION												
Clear Thermal Ice Chest & Ice												
Containers (3) 40 ml VOAs ()1 liter Amber (1) 500 ml Poly Requested PA 8021B POTHER												
Theserved Heserved He												
Comments Slight PHC ODOR												

1832 W. Cascade Ave, Hood River, OR 97031 Phone: (541) 387-4422, Ptld: (503) 977-2401



GROUND WATER PURGE & SAMPLE DATA

Project:	Meadowbro		16845 S. H\			OR	Sample Order ()	
	0/1/02	Sampl	ed By:	MPD				
		MON	ITORING W	ELL INF	ORMAT	ION		
Well Number	er MW	-3 G	eneral Locat	tion: Nu	ENTR	NZ	ar util pole	
Well Diame	ter (in)	al Depth (ft)15			Depth _ Wate	Depth to Ground Water (ft) 5.92		
							" Well = 0.66 gal/foot	
No. of Well to Purge	Volumes 3	3	_ Total Pu	ırge Voluı	me (gals	s)	63 ~ 5	
		WELL DEV	ELOPMENT	5.,, 1.,	NG INFO	RMATIC		
Time	Depth to Water	Gallons Purged	Cumulative Total	T.	С	рН	Comments	
10 25		•	0				STARTED PURGE	
10 29		1.5	1.5	62	1760		well vol	
10 32		1.5	3.0	45	1880	-	well vol	
10 37	7.85	2.0	5.0	66	1920		well vol (STOPPES PURGE	
11 26	5.98	0	5.0	slight	PHC	ODOR	COLLECTED SAMPLE	
Comments	: ≥ 85% stati	c water colu	mn < 7.2%	feet dept	n to wate	er		
Comments	. ≥ 00 /0 Stati			# s				
Collection 7	Time 11	GROUN 24	ID WATER S Appearar			Ther	mal Ice Chest & Ice	
Containers			er Amber () 500 ml l	Poly Re	equested	EPA 8021B EPA 8260B	
	#CL	Н	ICL	□ HCL				
Comments		5119	WI FACE	600 K				