Appendix E

Groundwater Analytical Reports



June 04, 2009

REVISION

Ms. Marta Nelson Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435

Work Order Number: 0901260 RE: 23/19-0B05

This is a revised report. The details of the revision are listed in the case narrative on the following page.

Enclosed are the results of analyses for samples received by the laboratory on 02/11/09. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND, unless consumed in the analysis, for 30 days from the date of the original report and then discarded unless other arrangements are made.

MDH Certification #027-123-295

Prepared by, LEGEND TECHNICAL SERVICES, INC

> Terri Olson Client Manager II tolson@legend-group.com

Erica Nastrom QA/QC Coordinator enastrom@legend-group.com

Legend Technical Services, Inc.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-C2-002	0901260-01	Water	02/09/09 15:10	02/11/09 13:40
MW-E2-209	0901260-02	Water	02/10/09 12:20	02/11/09 13:40
MW-E2-009	0901260-03	Water	02/10/09 12:40	02/11/09 13:40
MW-A6-006	0901260-04	Water	02/10/09 14:45	02/11/09 13:40
MW-E2-305	0901260-05	Water	02/10/09 17:20	02/11/09 13:40

Default Cooler	Temperature (°C): 5.8	
Received on ice: Yes Received on melt water: No Custody seals: No	Temperature blank was present Ambient: No	Received on ice pack: No Acceptable (IH/ISO only): No

Case Narrative:

MN Certification does not apply to the bicarbonate, chloride, sulfate, phosphate, or fluoride analyses.

This report contains data that were produced by a subcontracted laboratory certified for the fields of testing performed. The ammonia as N and nitrate+nitrite as N analyses for the Clean Water Program were performed by Davy Laboratories, LaCrosse, WI, #055-999-151.

Sodium and calcium recoveries in the MSD sample and sodium recovery in the MS sample for batch B9B1706 were outside laboratory control limits due to the spike level being disproportionate to sample concentration. Recoveries in the LCS/LCSD samples and the corresponding RPDs were within limits. The source sample used for this batch was MW-C2-002.

This report was revised on March 5, 2009 to correct the Nitrate/Nitrite as N dilution factors for samples MW-E2-009 and MW-E2-305 from 5 to 1.

At the client's request, this report was revised on June 4, 2009 to indicate that the metals were dissolved and not total. The values reported were unchanged.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-002 (0901260-01) Water	Sampled: 02/0	9/09 15:	10 Receiv	ed: 02/11/0	9 13:40					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	73	1.0	0.0077	mg/L	1	"	"	"	"	M3
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"		
Magnesium	26	1.0	0.045	mg/L	1	"	"	"		
Manganese	0.39	0.020	0.00048	mg/L	1	"	"	"		
Potassium	3.0	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	54	2.0	0.040	mg/L	2	"	"	02/18/09	n	M3
MW-E2-209 (0901260-02) Water	Sampled: 02/1	0/09 12::	20 Receiv	ed: 02/11/0	9 13:40					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	70	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.41	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	23	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.20	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.9	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	9.5	1.0	0.020	mg/L	1	"	"	"	"	
MW-E2-009 (0901260-03) Water	Sampled: 02/1	0/09 12:4	40 Receiv	ed: 02/11/0	9 13:40					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	39	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	13	1.0	0.045	mg/L	1	"	"	"		
Manganese	0.24	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	3.5	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	97	5.0	0.10	mg/L	5	"	H	02/18/09	n	
MW-A6-006 (0901260-04) Water	Sampled: 02/1	0/09 14:4	45 Receiv	ed: 02/11/0	9 13:40					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	85	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	29	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.054	0.020	0.00048	mg/L	1	"	"	"		
Potassium	1.9	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	5.9	1.0	0.020	mg/L	1	"	"	"	n	
MW-E2-305 (0901260-05) Water	Sampled: 02/1	0/09 17::	20 Receiv	ed: 02/11/0	9 13:40					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	85	1.0	0.0077	mg/L	1	"	"	n		

Legend Technical Services, Inc.

Barr Engineering Co.	Project: 23/19-0B05	
4700 W 77th St	Project Number: 23/19-0B05GWAS330	Work Order #: 0901260
Minneapolis, MN 55435	Project Manager: Ms. Marta Nelson	Date Reported: 06/04/09

DISSOLVED METALS ANALYSIS Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E2-305 (0901260-05) Water Sampled: 02/10/09 17:20 Received: 02/11/09 13:40										
Iron	0.56	0.050	0.0047	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Magnesium	24	1.0	0.045	mg/L	1	"	"	"		
Manganese	0.35	0.020	0.00048	mg/L	1	"	"	"		
Potassium	3.0	1.0	0.028	mg/L	1	"	"	"		
Sodium	36	1.0	0.020	mg/L	1	"	"	"		



L E G E N D Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co.		Project:		23/19-0B	05						
4700 W 77th St		Project	Number:	23/19-0B	05GWAS33	30		Wo	rk Order #: 0	901260	
Minneapolis, MN 55435		Project	Manager:	Ms. Marta	Nelson			Dat	e Reported: 0	6/04/09	
					•••••						
		Leg	end Te	chnical S	Services	, Inc.					
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
MW-C2-002 (0901260-01) Water	Sampled: 02/09	/09 15:10	Receive	ed: 02/11/0	9 13:40						
Bicarbonate as CaCO3	270	20		mg/L	1	B9B2304	02/23/09	02/23/09	SM 2320 B-97		
Total Dissolved Solids	440	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97		
Total Organic Carbon	1.5	1.5	0.38	mg/L	1	B9B2407	02/24/09	02/25/09	SM 5310 C-00	QR-2	
MW-E2-209 (0901260-02) Water	09 (0901260-02) Water Sampled: 02/10/09 12:20 Received: 02/11/09 13:40										
Bicarbonate as CaCO3	250	20		mg/L	1	B9B2304	02/23/09	02/23/09	SM 2320 B-97		
Total Dissolved Solids	300	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97		
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2407	02/24/09	02/25/09	SM 5310 C-00		
MW-E2-009 (0901260-03) Water	Sampled: 02/10	/09 12:40	Receive	ed: 02/11/0	9 13:40						
Bicarbonate as CaCO3	250	20		mg/L	1	B9B2304	02/23/09	02/23/09	SM 2320 B-97		
Total Dissolved Solids	400	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97		
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2407	02/24/09	02/25/09	SM 5310 C-00		
MW-A6-006 (0901260-04) Water	Sampled: 02/10	/09 14:45	Receive	ed: 02/11/0	9 13:40						
Bicarbonate as CaCO3	240	20		mg/L	1	B9B2304	02/23/09	02/23/09	SM 2320 B-97		
Total Dissolved Solids	380	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97		
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2407	02/24/09	02/25/09	SM 5310 C-00		
MW-E2-305 (0901260-05) Water	Sampled: 02/10	/09 17:20	Receive	ed: 02/11/0	9 13:40						
Bicarbonate as CaCO3	260	20		mg/L	1	B9B2304	02/23/09	02/23/09	SM 2320 B-97		
Total Dissolved Solids	450	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97		
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2407	02/24/09	02/25/09	SM 5310 C-00		



Barr Engineering Co.		Proje	ct:	23/19-0B	05					
4700 W 77th St		Proje	ct Number:	23/19-0B	05GWAS33	30		Wo	rk Order #: 0	901260
Minneapolis, MN 55435		Proje	ct Manager:	Ms. Marta	a Nelson			Dat	e Reported: 0	6/04/09
			А		9056					
		Le	egend Te	chnical	Services	, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-002 (0901260-01) Water	Sampled: 02/0	9/09 15:1	0 Receive	ed: 02/11/0	09 13:40					
Chloride	24	5.0	0.55	mg/L	5	B9B1208	02/12/09	02/12/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	02/12/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	66	7.5	1.9	mg/L	5	"	"	02/12/09	"	
MW-E2-209 (0901260-02) Water	Sampled: 02/10	0/09 12:2	0 Receive	ed: 02/11/0	09 13:40					
Chloride	2.6	1.0	0.11	mg/L	1	B9B1208	02/12/09	02/12/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1		"	"	"	
Sulfate	18	1.5	0.38	mg/L	1	"	"	H	"	
MW-E2-009 (0901260-03) Water	Sampled: 02/10	0/09 12:4	0 Receive	ed: 02/11/0	09 13:40					
Chloride	6.0	1.0	0.11	mg/L	1	B9B1208	02/12/09	02/12/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	60	7.5	1.9	mg/L	5	"	"	02/12/09	"	
MW-A6-006 (0901260-04) Water	Sampled: 02/1	0/09 14:4	5 Receive	ed: 02/11/0	09 13:40					
Chloride	14	1.0	0.11	mg/L	1	B9B1208	02/12/09	02/12/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	30	3.0	0.76	mg/L	2	"	"	02/12/09	"	
MW-E2-305 (0901260-05) Water	Sampled: 02/1	0/09 17:2	0 Receive	ed: 02/11/0	09 13:40					
Chloride	20	5.0	0.55	mg/L	5	B9B1208	02/12/09	02/12/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	02/12/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	63	7.5	1.9	mg/L	5	"	"	02/12/09	"	



Barr Engineering Co.		Project:		23/19-0B	75					
4700 W 77th St		•)5 05GWAS33	0		Wo	ork Order #: 0	901260
Minneapolis, MN 55435		,		Ms. Marta		~			e Reported: 0	
		.,								
				lytical R .aborato	esuits ries, Inc.					
										
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-002 (0901260-01) Water	Sampled: 02/09	9/09 15:10	Receive	ed: 02/11/0	9 13:40					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	8.67	0.90	0.30	mg/L	1	"	"	03/02/09	SM 4500 NO3-F-00	
MW-E2-209 (0901260-02) Water	Sampled: 02/10	0/09 12:20	Receive	ed: 02/11/0	9 13:40					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	<0.90	0.90	0.30	mg/L	1	"	n	03/02/09	SM 4500 NO3-F-00	
MW-E2-009 (0901260-03) Water	Sampled: 02/10	0/09 12:40	Receive	ed: 02/11/0	9 13:40					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	4.38	0.90	0.30	mg/L	1	"		03/02/09	SM 4500 NO3-F-00	
MW-A6-006 (0901260-04) Water	Sampled: 02/10	0/09 14:45	Receive	ed: 02/11/0	9 13:40					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	9.39	0.90	0.30	mg/L	1	"	"	03/02/09	SM 4500 NO3-F-00	
MW-E2-305 (0901260-05) Water	Sampled: 02/10	0/09 17:20	Receive	ed: 02/11/0	9 13:40					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	12.2	0.90	0.30	mg/L	1	H	n	03/02/09	SM 4500 NO3-F-00	





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

					Spiko	Source		%REC		%RPD			
Analyte	Result	RL	MDL	Units	Spike Level	Result	%REC	Limits	%RPD	Limit	Notes		
Batch B9B1706 - EPA 200.7/3005A D	igestion												
Blank (B9B1706-BLK1)	U				Prepared & Analyzed: 02/17/09								
Aluminum	< 0.020	0.020	0.00017	mg/L		,							
Calcium	< 1.0	1.0	0.0077	mg/L									
Iron	< 0.050	0.050	0.0047	mg/L									
Magnesium	< 1.0	1.0	0.045	mg/L									
Manganese	< 0.020	0.020	0.00048	mg/L									
Potassium	< 1.0	1.0	0.028	mg/L									
Sodium	< 1.0	1.0	0.020	mg/L									
LCS (B9B1706-BS1)					Prepared	I & Analyze	ed: 02/17/0	09					
Aluminum	1.86	0.020	0.00017	mg/L	2.00		93.2	80-120					
Calcium	4.14	1.0	0.0077	mg/L	3.99		104	80-120					
Iron	2.05	0.050	0.0047	mg/L	2.00		102	80-120					
Magnesium	4.01	1.0	0.045	mg/L	3.99		100	80-120					
Manganese	0.411	0.020	0.00048	mg/L	0.399		103	80-120					
Potassium	2.08	1.0	0.028	mg/L	2.00		104	80-120					
Sodium	3.71	1.0	0.020	mg/L	3.99		93.0	80-120					
LCS Dup (B9B1706-BSD1)					Prepared	I & Analyze	ed: 02/17/0	09					
Aluminum	1.88	0.020	0.00017	mg/L	2.00		93.8	80-120	0.635	20			
Calcium	4.15	1.0	0.0077	mg/L	3.99		104	80-120	0.197	20			
Iron	2.08	0.050	0.0047	mg/L	2.00		104	80-120	1.37	20			
Magnesium	4.03	1.0	0.045	mg/L	3.99		101	80-120	0.569	20			
Manganese	0.415	0.020	0.00048	mg/L	0.399		104	80-120	0.883	20			
Potassium	2.09	1.0	0.028	mg/L	2.00		104	80-120	0.502	20			
Sodium	3.77	1.0	0.020	mg/L	3.99		94.5	80-120	1.63	20			
Matrix Spike (B9B1706-MS1)	S	ource:	0901260-0	1	Prepared & Analyzed: 02/17/09								
Aluminum	1.95	0.020	0.00017	mg/L	2.00	<0.020	97.5	75-125					
Calcium	77.8	1.0	0.0077	mg/L	3.99	73.3	112	75-125					
Iron	2.05	0.050	0.0047	mg/L	2.00	<0.050	101	75-125					
Magnesium	29.9	1.0	0.045	mg/L	3.99	25.6	106	75-125					
Manganese	0.788	0.020	0.00048	mg/L	0.399	0.388	100	75-125					
Potassium	5.38	1.0	0.028	mg/L	2.00	3.04	117	75-125					
Sodium	59.9	2.0	0.040	mg/L	3.99	53.8	153	75-125			M3		
Matrix Spike Dup (B9B1706-MSD1)	S		0901260-0	1	Prepared	I & Analyze	ed: 02/17/0	09					
Aluminum	1.97	0.020	0.00017	mg/L	2.00	<0.020	98.4	75-125	0.954	20			
Calcium	79.2	1.0	0.0077	mg/L	3.99	73.3	148	75-125	1.86	20	M3		
Iron	2.05	0.050	0.0047	mg/L	2.00	<0.050	101	75-125	0.327	20			
Magnesium	30.4	1.0	0.045	mg/L	3.99	25.6	119	75-125	1.75	20			
Manganese	0.798	0.020	0.00048	mg/L	0.399	0.388	103	75-125	1.23	20			
Potassium	5.44	1.0	0.028	mg/L	2.00	3.04	120	75-125	1.13	20			

Legend Technical Services, Inc.



4700 W 77th StProject Number:23/19-0B05GWAS330Work Order #:0901260Minneapolis, MN 55435Project Manager:Ms. Marta NelsonDate Reported:06/04/09	Barr Engineering Co.	Project:	23/19-0B05		
Minneapolis, MN 55435 Project Manager: Ms. Marta Nelson Date Reported: 06/04/09	4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
	Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9B1706 - EPA 200.7/3005A Digestion											
Matrix Spike Dup (B9B1706-MSD1)	S	ource: (901260-0	1	Prepared	l: 02/17/09	Analyzed	I: 02/18/09)		
Sodium	60.4	2.0	0.040	mg/L	3.99	53.8	166	75-125	0.878	20	M3





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	: Ms. Marta Nelson	Date Reported:	06/04/09

WET CHEMISTRY - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9B1606 - General Prep											
Blank (B9B1606-BLK1)					Prepared	& Analyz	ed: 02/16/	09			
Total Dissolved Solids	< 10	10		mg/L							
Duplicate (B9B1606-DUP1)	S	ource	0901260-0	1	Prepared	& Analyz	ed: 02/16/	09			
Total Dissolved Solids	454	10		mg/L		444			2.23	10	
Reference (B9B1606-SRM1)					Preparec	& Analyz	ed: 02/16/	09			
Total Dissolved Solids	24.0	10		mg/L	23.9		100	94.6-105.4			
Batch B9B2304 - General Prep											
Blank (B9B2304-BLK1)					Prepared	& Analyz	ed: 02/23/	09			
Bicarbonate as CaCO3	< 20	20		mg/L							
Duplicate (B9B2304-DUP1)	Source: 0901260-01		Prepared	& Analyz	ed: 02/23/	09					
Bicarbonate as CaCO3	266	20		mg/L		268			0.749	20	
Reference (B9B2304-SRM1)					Preparec	& Analyz	ed: 02/23/	09			
Bicarbonate as CaCO3	221	20		mg/L	224		98.7	90-110			
Batch B9B2407 - General Prep											
Blank (B9B2407-BLK1)					Prepared	1: 02/24/09	Analyze	d: 02/25/09			
Total Organic Carbon	< 1.5	1.5	0.38	mg/L							
Duplicate (B9B2407-DUP1)	S	ource	0901260-0	1	Preparec	1: 02/24/09	Analyze	d: 02/25/09			
Total Organic Carbon	1.16	1.5	0.38	mg/L		<1.5			NA	20	QR-2
Reference (B9B2407-SRM1)					Preparec	1: 02/24/09	Analyze	d: 02/25/09			
Total Organic Carbon	25.3	1.5	0.38	mg/L	25.0		101	80-120			





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANIONS 9056 - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
	Result	NL.	IVIDL	Units	Level	Result	/0RLC	LIIIIIIS	70INF D	LIIIII	NOLES
Batch B9B1208 - General Prep Dept 4											
Blank (B9B1208-BLK1)					Preparec	I & Analyze	ed: 02/12/	09			
Chloride	< 1.0	1.0	0.11	mg/L							
Fluoride	< 0.50	0.50	0.076	mg/L							
Phosphate	< 2.1	2.1	0.22	mg/L							
Sulfate	< 1.5	1.5	0.38	mg/L							
LCS (B9B1208-BS1)					Prepared & Analyzed: 02/12/09						
Chloride	4.90	1.0	0.11	mg/L	5.00		98.0	85-120			
Fluoride	2.50	0.50	0.076	mg/L	2.50		100	80-120			
Phosphate	5.40	2.1	0.22	mg/L	5.00		108	80-120			
Sulfate	5.00	1.5	0.38	mg/L	5.00		100	81.5-120			
LCS Dup (B9B1208-BSD1)					Preparec	I & Analyze	ed: 02/12/	09			
Chloride	4.90	1.0	0.11	mg/L	5.00		98.0	85-120	0.00	15	
Fluoride	2.50	0.50	0.076	mg/L	2.50		100	80-120	0.00	15	
Phosphate	5.30	2.1	0.22	mg/L	5.00		106	80-120	1.87	15	
Sulfate	4.90	1.5	0.38	mg/L	5.00		98.0	81.5-120	2.02	20	
Matrix Spike (B9B1208-MS1)	S	ource:	0901260-0	01	Prepared & Analyzed: 02/12/09						
Fluoride	2.80	0.50	0.076	mg/L	2.50	<0.50	112	80-120			
Phosphate	4.80	2.1	0.22	mg/L	5.00	<2.1	96.0	80-120			
Matrix Spike (B9B1208-MS2)	S	ource:	0901260-0	01	Prepared & Analyzed: 02/12/09						
Chloride	52.0	5.0	0.55	mg/L	25.0	24.5	110	80-120			
Sulfate	90.5	7.5	1.9	mg/L	25.0	66.5	96.0	80-120			
Matrix Spike Dup (B9B1208-MSD1)	S	ource:	0901260-0	01	Prepared & Analyzed: 02/12/09						
Fluoride	2.60	0.50	0.076	mg/L	2.50	<0.50	104	80-120	7.41	15	
Phosphate	5.20	2.1	0.22	mg/L	5.00	<2.1	104	80-120	8.00	20	
Matrix Spike Dup (B9B1208-MSD2)	S	ource:	0901260-0)1	Prepared & Analyzed: 02/12/09						
Chloride	51.0	5.0	0.55	mg/L	25.0	24.5	106	80-120	1.94	15	
Sulfate	89.5	7.5	1.9	mg/L	25.0	66.5	92.0	80-120	1.11	15	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Analytical Results - Quality Control Davy Laboratories, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch N/A - No Prep											
BLK (0901260-BLK)					Prepared:	Analyze	d: 02/20/0	9			
Ammonia as N	<0.19	0.19		mg/L		<0.19		-			
Nitrate/Nitrite as N	<0.90	0.90		mg/L		<0.90		-			



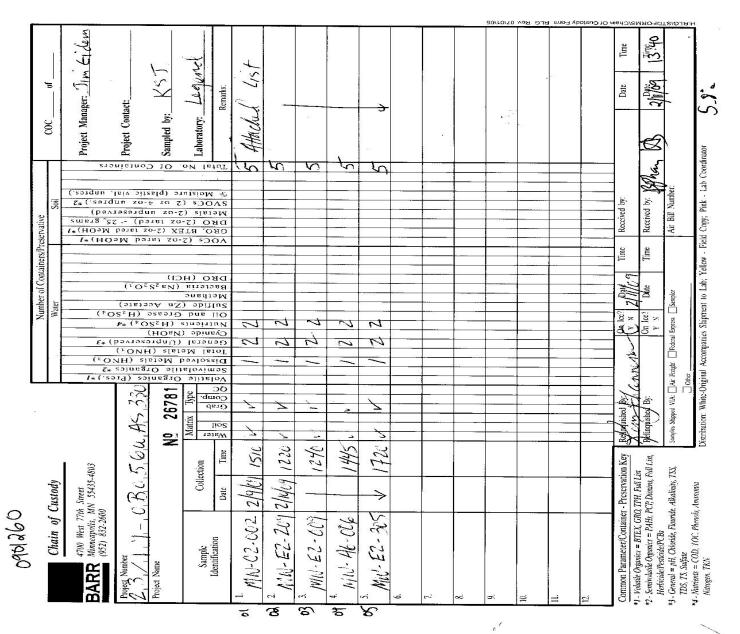
Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901260
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Notes and Definitions

- QR-2 Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.
- M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
- < Less than value listed
- dry Sample results reported on a dry weight basis
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
- MS Matrix Spike = Laboratory Fortified Matrix (LFM)









19-0B05.03 GWAS 330			
kota County, MN			
Analytical Develo	Method	Reporting	Comment
Analytical Parameters	Number	Limit (mg/L)	
Aluminum	EPA 6010B	0.020	
Calcium	EPA 6010B	1.0	
Magnesium	EPA 6010B	1.0	
Iron .	EPA 6010B	0.050	
Manganese	EPA 6010B	0.020	
Sodium	EPA 6010B	1.0	
Potassium	EPA 6010B		· · · · · · · · · · · · · · · · · · ·
Chloride	EPA 9056 (M)	1.0	
Bicarbonate	SM 2320B (97)	20	calculation
Sulfate	EPA 9056 (M)	1.5	calculation
Nitrate + Nitrite (as N)	SM 4500-NO3F	0.20	subcontract
Ammonia	EPA 350.1	1.0	subcontract
TOC	SM 5310C	1.5	subcontract
TDS	SM 2540 C (97)	1.5	
Phosphate	EPA 9056 (M)		
Fluoride		2.1	
	EPA 9056 (M)	0.50	
ld Parameters			
Temp			
Conductivity			
pH			
ORP			

P:\MpIs\23 MN\19\2319B05 UMore park environmental\WorkFiles\EIS Support\Implementation\Groundwater\Sampling Parameters

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June 04, 2009

REVISION

Ms. Marta Nelson Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435

Work Order Number: 0901301 RE: 23/19-0B05

This is a revised report. The details of the revision are listed in the case narrative on the following page.

Enclosed are the results of analyses for samples received by the laboratory on 02/13/09. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND, unless consumed in the analysis, for 30 days from the date of the original report and then discarded unless other arrangements are made.

MDH Certification #027-123-295

Prepared by, LEGEND TECHNICAL SERVICES, INC

> Terri Olson Client Manager II tolson@legend-group.com

Erica Nastrom QA/QC Coordinator enastrom@legend-group.com

Legend Technical Services, Inc.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-E4-010	0901301-01	Water	02/12/09 10:30	02/13/09 16:25
MW-D3-007	0901301-02	Water	02/12/09 12:50	02/13/09 16:25
MW-C2-202	0901301-03	Water	02/12/09 13:15	02/13/09 16:25
MW-A3-003	0901301-04	Water	02/12/09 15:20	02/13/09 16:25
MW-C4-311	0901301-05	Water	02/12/09 17:30	02/13/09 16:25
MW-C7-004	0901301-06	Water	02/13/09 10:50	02/13/09 16:25
MW-D5-308	0901301-07	Water	02/13/09 12:45	02/13/09 16:25
MW-B1-001	0901301-08	Water	02/13/09 15:10	02/13/09 16:25
M-1	0901301-09	Water	02/13/09 00:00	02/13/09 16:25
FB-1	0901301-10	Water	02/13/09 15:30	02/13/09 16:25

Shipping Container Information										
Default Cooler	Temperature (°C): 1.9									
Received on ice: Yes Received on melt water: No Custody seals: No	Temperature blank was present Ambient: No	Received on ice pack: No Acceptable (IH/ISO only): No								

Case Narrative:

MN Certification does not apply to the bicarbonate, chloride, sulfate, phosphate, or fluoride analyses.

This report contains data that were produced by a subcontracted laboratory certified for the fields of testing performed. The ammonia as N and nitrate+nitrite as N analyses for the Clean Water Program were performed by Davy Laboratories, LaCrosse, WI, #055-999-151.

Sodium and calcium recoveries in the MSD sample and sodium recovery in the MS sample for batch B9B1706 were outside laboratory control limits due to the spike level being disproportionate to sample concentration. Recoveries in the LCS/LCSD samples and the corresponding RPDs were within limits. The source sample used is not associated with this work order.

At the client's request, this report was revised on June 4, 2009 to indicate that the metals were dissolved and not total. The values reported were unchanged.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E4-010 (0901301-01) Water	Sampled: 02/1	2/09 10:3	30 Receiv	ed: 02/13/0	9 16:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	96	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"		"	
Magnesium	33	1.0	0.045	mg/L	1	"	"		"	
Manganese	0.22	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	2.3	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	7.1	1.0	0.020	mg/L	1	"	"	"	n	
MW-D3-007 (0901301-02) Water	Sampled: 02/1	2/09 12:	50 Receiv	ed: 02/13/0	9 16:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	88	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	29	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.080	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	2.4	1.0	0.028	mg/L	1	"	"		"	
Sodium	13	1.0	0.020	mg/L	1	"	"	"	n	
MW-C2-202 (0901301-03) Water	Sampled: 02/1	2/09 13:'	15 Receiv	ed: 02/13/0	9 16:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	86	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.16	0.050	0.0047	mg/L	1	"	"		"	
Magnesium	29	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.034	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	3.0	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	40	1.0	0.020	mg/L	1	"	n	"	"	
MW-A3-003 (0901301-04) Water	Sampled: 02/1	2/09 15:2	20 Receiv	ed: 02/13/0	9 16:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/17/09	EPA 6010B (Dissolved)	
Calcium	85	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.058	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	28	1.0	0.045	mg/L	1	"	"		"	
Manganese	0.028	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.6	1.0	0.028	mg/L	1	"	"		"	
Sodium	4.2	1.0	0.020	mg/L	1	"	"	"	n	
MW-C4-311 (0901301-05) Water	Sampled: 02/1	2/09 17::	30 Receiv	ed: 02/13/0	9 16:25					-
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)	
Calcium	58	1.0	0.0077	mg/L	1	"	"	"	"	

Legend Technical Services, Inc.



Analyte MW-C4-311 (0901301-05) Water S Iron Magnesium	<0.050	Le RL															
MW-C4-311 (0901301-05) Water S	Sampled: 02/12 <0.050		MDL	Legend Technical Services, Inc. Analyte Result RL MDL Units Dilution Batch Prepared Analyzed Method Notes													
Iron	<0.050	2/09 17:3		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes							
			0 Receiv	ed: 02/13/09	16:25												
Magnesium		0.050	0.0047	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B								
-	25	1.0	0.045	mg/L	1				(Dissolved) "								
Manganese	0.24	0.020	0.00048	mg/L	1	"	"	"	"								
Potassium	1.3	1.0	0.028	mg/L	1	"	"										
Sodium	11	1.0	0.020	mg/L	1	"	"	"	"								
MW-C7-004 (0901301-06) Water S	Sampled: 02/13	3/09 10:5	0 Receiv	ed: 02/13/09	16:25												
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)								
Calcium	99	1.0	0.0077	mg/L	1	"	"	"									
Iron	0.15	0.050	0.0047	mg/L	1	"	"		"								
Magnesium	28	1.0	0.045	mg/L	1	"	"	"	н								
Manganese	0.051	0.020	0.00048	mg/L	1	"	"	"	"								
Potassium	1.4	1.0	0.028	mg/L	1												
Sodium	6.4	1.0	0.020	mg/L	1												
MW-D5-308 (0901301-07) Water S	sampled: 02/1	3/09 12:4	5 Receiv	ed: 02/13/09	16:25												
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)								
Calcium	79	1.0	0.0077	mg/L	1	"	"	"	"								
Iron	<0.050	0.050	0.0047	mg/L	1	"	"										
Magnesium	24	1.0	0.045	mg/L	1	"	"										
Manganese	0.15	0.020	0.00048	mg/L	1	"	"	"									
Potassium	1.9	1.0	0.028	mg/L	1	"	"	"	"								
Sodium	25	1.0	0.020	mg/L	1	"	"		I								
MW-B1-001 (0901301-08) Water S	Sampled: 02/13	3/09 15:1	0 Receiv	ed: 02/13/09	16:25												
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)								
Calcium	60	1.0	0.0077	mg/L	1	"	"	"									
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"								
Magnesium	22	1.0	0.045	mg/L	1												
Manganese Potassium	0.12	0.020	0.00048	mg/L	1												
Sodium	1.7 3.8	1.0 1.0	0.028 0.020	mg/L mg/L	1 1			"									
				-	1												
M-1 (0901301-09) Water Sampled Aluminum	<0.020	0.020	0.00017	3/09 16:25 mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B								
Calcium	100	1.0	0.0077	mg/L	1		"	"	(Dissolved) "								
Iron	0.11	0.050	0.0047	mg/L	1	"	"		"								
Magnesium	28	1.0	0.045	mg/L	1	"	"										
Manganese	0.051	0.020	0.00048	mg/L	1	"	"										

Legend Technical Services, Inc.

Barr Engineering Co.		Proje	ect:	23/19-0B0	5					
4700 W 77th St		Proje	ect Number:	23/19-0B0	5GWAS33	30		Wor	k Order #:	0901301
Minneapolis, MN 55435		Proje	ect Manager	: Ms. Marta	Nelson			Date	e Reported:	06/04/09
		D	ISSOLVE	D METAL	S ANAL	YSIS				
		L	egend Te	echnical S	ervices	, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M-1 (0901301-09) Water	Sampled: 02/13/09 00:	00 Rec	eived: 02/	13/09 16:25						
Potassium	1.4	1.0	0.028	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)	
Sodium	6.4	1.0	0.020	mg/L	1		"	"		
FB-1 (0901301-10) Water	Sampled: 02/13/09 15	:30 Re	ceived: 02	/13/09 16:25						
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9B1706	02/17/09	02/18/09	EPA 6010B (Dissolved)	
Calcium	<1.0	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	<1.0	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	<0.020	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	<1.0	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	<1.0	1.0	0.020	mg/L	1	"	"	"	"	



L E G E N D Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		•	Number:	23/19-0B0 23/19-0B0 : Ms. Marta	5GWAS33	30			rk Order #: 09 e Reported: 00	901301 6/04/09
		Leç		T CHEMI		, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E4-010 (0901301-01) Water	Sampled: 02/12	/09 10:30	Receiv	red: 02/13/09	9 16:25					
Bicarbonate as CaCO3	200	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	420	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	QR-2
MW-D3-007 (0901301-02) Water	Sampled: 02/12	/09 12:50	Receiv	ved: 02/13/0	9 16:25					
Bicarbonate as CaCO3	240	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	400	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-C2-202 (0901301-03) Water	Sampled: 02/12	/09 13:15	Receiv	/ed: 02/13/0	9 16:25					
Bicarbonate as CaCO3	270	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	460	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-A3-003 (0901301-04) Water	Sampled: 02/12	/09 15:20	Receiv	red: 02/13/09	9 16:25					
Bicarbonate as CaCO3	250	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	370	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-C4-311 (0901301-05) Water	Sampled: 02/12	/09 17:30	Receiv	ved: 02/13/0	9 16:25					
Bicarbonate as CaCO3	260	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	310	10		mg/L	1	B9B1606	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-C7-004 (0901301-06) Water	Sampled: 02/13	/09 10:50	Receiv	/ed: 02/13/0	9 16:25					
Bicarbonate as CaCO3	290	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	420	10		mg/L	1	B9B1613	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-D5-308 (0901301-07) Water	Sampled: 02/13	/09 12:45	Receiv	ved: 02/13/0	9 16:25					
Bicarbonate as CaCO3	280	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	380	10		mg/L	1	B9B1613	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
MW-B1-001 (0901301-08) Water	Sampled: 02/13	/09 15:10	Receiv	/ed: 02/13/0	9 16:25					
Bicarbonate as CaCO3	260	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	310	10		mg/L	1	B9B1613	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	
M-1 (0901301-09) Water Sample	ed: 02/13/09 00:0	0 Recei	ved: 02/1	3/09 16:25						
Bicarbonate as CaCO3	260	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97	
Total Dissolved Solids	410	10		mg/L	1	B9B1613	02/16/09	02/16/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	

Legend Technical Services, Inc.

Barr Engineering Co.		Pro	oject:	23/19-0B0)5									
4700 W 77th St	4700 W 77th St Project Number: 23/19-0B05GWAS330													
Minneapolis, MN 55435		Pro	oject Manager	: Ms. Marta		Date Reported: 06/04/09								
	WET CHEMISTRY Legend Technical Services, Inc.													
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes				
FB-1 (0901301-10) Water	Sampled: 02/13/09 15	:30 F	Received: 02/	13/09 16:2	5									
Bicarbonate as CaCO3	<20	20		mg/L	1	B9B2508	02/25/09	02/25/09	SM 2320 B-97					
Total Dissolved Solids	93	10		mg/L	1	B9B1613	02/16/09	02/16/09	SM 2540 C-97					
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9B2507	02/25/09	02/25/09	SM 5310 C-00	i				



Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		•	Number	23/19-0B0 : 23/19-0B0 r: Ms. Marta	5GWAS33	30			rk Order #: 0 e Reported: 0	901301 6/04/09
		Leç		ANIONS 9 echnical S		, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E4-010 (0901301-01) Water	Sampled: 02/12	2/09 10:30	Recei	ved: 02/13/0	9 16:25					
Chloride	33	5.0	0.55	mg/L	5	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	02/16/09	н	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	н	
Sulfate	22	1.5	0.38	mg/L	1	"	"	"	"	
MW-D3-007 (0901301-02) Water	Sampled: 02/1	2/09 12:50	Recei	ved: 02/13/0	9 16:25					
Chloride	20	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	29	1.5	0.38	mg/L	1	"	"	"	"	
MW-C2-202 (0901301-03) Water	Sampled: 02/12	2/09 13:15	Recei	ved: 02/13/0	9 16:25					
Chloride	19	5.0	0.55	mg/L	5	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	02/16/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"		н	
Sulfate	70	7.5	1.9	mg/L	5	"	"	02/16/09	н	
MW-A3-003 (0901301-04) Water	Sampled: 02/12	2/09 15:20	Recei	ved: 02/13/0	9 16:25					
Chloride	13	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"		н	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	н	
Sulfate	30	1.5	0.38	mg/L	1	"	"	"	"	
MW-C4-311 (0901301-05) Water	Sampled: 02/1	2/09 17:30	Recei	ved: 02/13/0	9 16:25					
Chloride	2.8	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	19	1.5	0.38	mg/L	1	"	"	"	н	
MW-C7-004 (0901301-06) Water	Sampled: 02/1	3/09 10:50	Recei	ved: 02/13/0	9 16:25					
Chloride	12	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"			11	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	n	
Sulfate	18	1.5	0.38	mg/L	1	"	"	"	"	
MW-D5-308 (0901301-07) Water	Sampled: 02/1	3/09 12:45	Recei	ved: 02/13/0	9 16:25					
Chloride	9.8	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"			11	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	38	7.5	1.9	mg/L	5	"	"	02/16/09	"	

Legend Technical Services, Inc.

Barr Engineering Co.		Proje	ect:	23/19-0B	05					
4700 W 77th St		Proje	ect Number:	23/19-0B	05GWAS33	30		Wo	rk Order #:	0901301
Minneapolis, MN 55435		Proje	ect Manager	: Ms. Marta	a Nelson			Dat	e Reported:	06/04/09
			Å	ANIONS 9	056					
		L	egend Te	echnical S	Services	, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-B1-001 (0901301-08) Water	r Sampled: 02/1	3/09 15:	10 Receiv	/ed: 02/13/0	9 16:25					
Chloride	12	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1		"	"		
Phosphate	<2.1	2.1	0.22	mg/L	1		"	"		
Sulfate	9.2	1.5	0.38	mg/L	1	"	"	"		
M-1 (0901301-09) Water Samp	oled: 02/13/09 00:	00 Re	ceived: 02/1	13/09 16:25						
Chloride	12	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1		"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1		"	"	"	
Sulfate	19	1.5	0.38	mg/L	1	"	"	"	"	
FB-1 (0901301-10) Water Sam	pled: 02/13/09 15	:30 Re	eceived: 02	/13/09 16:2	5					
Chloride	<1.0	1.0	0.11	mg/L	1	B9B1607	02/16/09	02/16/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1		"	"		
Phosphate	<2.1	2.1	0.22	mg/L	1		"	"		
Sulfate	<1.5	1.5	0.38	mg/L	1		"	"	"	



Barr Engineering Co. 4700 W 77th St		•	Number:		05GWAS33	D				01301
Minneapolis, MN 55435		Project	Ana	Ms. Marta Iytical R aborato				Dat	e Reported: 06	0/04/09
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E4-010 (0901301-01) Water	Sampled: 02/12	2/09 10:30	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	14.6	0.90	0.30	mg/L	1	"	"	03/02/09	SM 4500 NO3-F-00	
MW-D3-007 (0901301-02) Water	Sampled: 02/12	2/09 12:50	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	11.5	0.90	0.30	mg/L	1		n	03/02/09	SM 4500 NO3-F-00	
MW-C2-202 (0901301-03) Water	Sampled: 02/12	2/09 13:15	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	2.39	0.90	0.30	mg/L	1	"	n	03/02/09	SM 4500 NO3-F-00	
MW-A3-003 (0901301-04) Water	Sampled: 02/12	2/09 15:20	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	8.00	0.90	0.30	mg/L	1	"	"	03/02/09	SM 4500 NO3-F-00	
MW-C4-311 (0901301-05) Water	Sampled: 02/12	2/09 17:30	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	3.53	0.90	0.30	mg/L	1	"	H	03/02/09	SM 4500 NO3-F-00	
MW-C7-004 (0901301-06) Water	Sampled: 02/13	3/09 10:50	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	7.26	0.90	0.30	mg/L	1	n	n	03/02/09	SM 4500 NO3-F-00	
MW-D5-308 (0901301-07) Water	Sampled: 02/13	3/09 12:45	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	1.42	0.90	0.30	mg/L	1	"	n	03/02/09	SM 4500 NO3-F-00	
MW-B1-001 (0901301-08) Water	Sampled: 02/13	3/09 15:10	Receive	ed: 02/13/0	9 16:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	9.03	0.90	0.30	mg/L	1	"	"	03/02/09	SM 4500 NO3-F-00	
M-1 (0901301-09) Water Sample	ed: 02/13/09 00:0	00 Recei	ved: 02/1	3/09 16:25						
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	3.93	0.90	0.30	mg/L	1	n	n	03/02/09	SM 4500 NO3-F-00	

FB-1 (0901301-10) Water Sampled: 02/13/09 15:30 Received: 02/13/09 16:25

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		,	ect: ect Number: ect Manager:		05GWAS33	0			rk Order #: e Reported:	0901301 06/04/09		
Analytical Results Davy Laboratories, Inc.												
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
FB-1 (0901301-10) Water Sample	ed: 02/13/09 15:	30 Re	eceived: 02/	13/09 16:2	5							
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		02/20/09	SM 4500 NH3 C-97			
Nitrate/Nitrite as N	<0.90	0.90	0.30	mg/L	1	"	п	03/02/09	SM 4500 NO3-F-00			





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Prepared & Analyzed: 02/17/09 Prepared & Analyzed: 02/17/09 Prepared & Analyzed: 02/17/09 Sum (B9B1706-BLK1) On 0.0000 0.0000 0.00007 mg/L Colspan="2">Prepared & Analyzed: 02/17/09 Colspan="2">Colspan="2" Colspan="2">Colspan="2" Colspan="2"	Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Blank (B9B1706-BLK1) Prepared & Analyzet: UUTI/IV Summum < 0.020 0.0007 mgL					01110	2010.	rtooun	/01/20	2	/0.4.2		
Numinum <t< td=""><td></td><td>igeenen</td><td></td><td></td><td></td><td>Prepared</td><td>& Analyze</td><td>ed: 02/17/0</td><td>19</td><td></td><td></td><td></td></t<>		igeenen				Prepared	& Analyze	ed: 02/17/0	19			
Decision 1.0 1.0 0.0077 mg/L 1.0 0.0077 mg/L con <.0080	Aluminum	< 0.020	0.020	0.00017	ma/L		<i>a, ,</i> , <u>,</u> , <u>,</u> ,					
con </td <td>Calcium</td> <td></td> <td></td> <td>0.0077</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Calcium			0.0077	-							
Anganese < 0.020 0.020 0.0004 mgL Valassimin < 1.0	Iron	< 0.050	0.050	0.0047	-							
basisium <1.0 1.0 0.028 mg/L Sedium <1.0	Magnesium	< 1.0	1.0	0.045	mg/L							
bidum c1.0 1.0 0.000 mgL LCS (B9B1706-BS1) Prepared & Analyzet 02/17/0 8/3.2 8/12/0 8/12/0 Caldium 1.84 0.0007 mgL 2.00 9.3.2 8/12/0 8/12/0 Caldium 1.01 0.0077 mgL 3.94 1.00 80/12/0 8/12/0 8/12/0 Manganese 0.411 0.002 0.004 mgL 2.02 1.00 80/12/0 8/12/0 8/12/0 8/12/0 8/12/0 8/12/0 8/12/0 9/12/0 <td>Manganese</td> <td>< 0.020</td> <td>0.020</td> <td>0.00048</td> <td>mg/L</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Manganese	< 0.020	0.020	0.00048	mg/L							
CS (B9B1706-BS1) Prepared & Analyzed: 0.2/17/09 utuminum 1.86 0.020 0.00017 mg/L 2.00 93.2 80-120 Jalcium 4.14 1.0 0.00077 mg/L 3.99 104 80-120 Aggnesium 4.01 1.0 0.045 mg/L 3.99 103 80-120 Aggnesium 2.08 1.0 0.028 mg/L 2.09 103 80-120 Solaum 2.08 1.0 0.028 mg/L 2.09 104 80-120 CS Dup (B9B1706-BSD1) mg/L 2.00 104 80-120 0.197 20 Vuminum 1.88 0.020 0.0017 mg/L 3.99 104 80-120 0.555 20 Adagnesium 4.15 1.0 0.0077 mg/L 3.99 104 80-120 0.569 20 Manganese 0.415 0.020 0.0047 mg/L 3.99 101 80-120 0.569 20	Potassium	< 1.0	1.0	0.028	mg/L							
Huminum 1.86 0.020 0.00017 mg/L 2.00 93.2 80-120 Jacium 4.14 1.0 0.0077 mg/L 3.99 104 80-120 Agnesium 4.01 1.0 0.005 mg/L 3.99 100 80-120 Agnesium 4.01 0.020 mg/L 3.99 100 80-120 Vatassium 2.08 0.0208 mg/L 2.09 80-120 V V Solutim 3.11 0.020 mg/L 2.09 83.8 80-120 0.195 20 CS Dup (B9B1706-BSD1) V 0.00077 mg/L 3.99 101 80-120 0.197 20 Vatassium 4.18 0.020 0.00077 mg/L 3.99 104 80-120 0.137 20 Vatassium 4.18 0.020 0.00077 mg/L 3.99 101 80-120 0.569 20 Vatassium 2.09 1.0 0.0207 <	Sodium	< 1.0	1.0	0.020	mg/L							
Salaium 4.14 1.0 0.0077 ng/L 3.99 104 80-120 ron 2.05 0.050 0.0047 ng/L 2.00 100 80-120 Alegnesium 4.0 1.0 0.048 ng/L 3.99 100 80-120 Alegnesium 2.08 1.0 0.028 ng/L 3.99 104 80-120 Solutim 2.08 1.0 0.028 ng/L 3.99 104 80-120 Solutim 2.08 1.0 0.028 ng/L 3.99 50 80-120 CS Dug (B9B1706-BSD1) 7 ng/L 2.00 104 80-120 0.635 20 Vanimum 1.88 0.020 0.0017 mg/L 2.00 104 80-120 0.635 20 Solutim 1.0 0.0017 mg/L 2.00 104 80-120 0.83 20 Solutim 1.0 0.0017 mg/L 2.00 104 80-120 0.83 20 Alegnesium 1.0 0.0024 mg/L 2.00	LCS (B9B1706-BS1)					Prepared	& Analyze	ed: 02/17/0)9			
non2.050.0500.0047ng/L2.001.0280-120Agnesium4.010.0200.00048ng/L0.39910380-120Alanganese0.100.020ng/L0.39910380-120Sodium3.711.00.020ng/L2.0010480-120Sodium3.711.00.020ng/L2.0010480-120Sodium1.880.0200.00017ng/L2.002.010.63520Sadium1.880.0200.0007ng/L2.029.8880-1200.63520Sadium1.880.0200.0047ng/L2.001.0480-1200.19720Agnesium1.880.0200.0047ng/L3.991.0480-1200.56920Agnesium4.031.00.0047ng/L3.991.0480-1200.56920Agnesium4.031.00.0047ng/L3.991.0480-1200.56920Adagnesium4.031.00.0047ng/L3.991.0480-1200.56920Adagnesium4.771.00.020ng/L3.997.57.5-1251.521Variantinum1.750.020ng/L3.992.561.675-1251.51.6Adagnesium1.950.0200.0047ng/L3.992.561.675-1251.51.6 <t< td=""><td>Aluminum</td><td>1.86</td><td>0.020</td><td>0.00017</td><td>mg/L</td><td>2.00</td><td></td><td>93.2</td><td>80-120</td><td></td><td></td><td></td></t<>	Aluminum	1.86	0.020	0.00017	mg/L	2.00		93.2	80-120			
Atagnesium 4.01 1.0 0.045 mg/L 3.99 100 80-120 Aanganese 0.411 0.020 0.0048 mg/L 0.399 103 80-120 Potassium 2.08 0.02 mg/L 3.99 93.0 80-120 - - Cost p(B9B1706-BSD1) Trepered & Analyzer C2/17/00 93.8 80-120 0.635 20 Salerium 1.88 0.020 0.00017 mg/L 2.00 93.8 80-120 0.635 20 Salerium 1.88 0.020 0.00017 mg/L 2.00 93.8 80-120 0.635 20 Salerium 1.88 0.020 0.0007 mg/L 2.00 104 80-120 0.635 20 Salerium 4.05 0.020 0.0047 mg/L 2.09 104 80-120 0.502 20 Aanganese 0.415 0.20 0.028 mg/L 2.09 104 80-120 0.502 20 Salerium 1.95 0.020 mg/L 2.09 3.99<	Calcium	4.14	1.0	0.0077	mg/L	3.99		104	80-120			
Araganese 0.411 0.020 0.0048 m/L 0.399 103 80-120 bassium 2.08 1.0 0.028 mgL 2.00 104 80-120 botassium 3.71 1.0 0.020 mgL 3.99 93.0 80-120 CS Dup (B9B1706-BSD1) Prepared & Analyzet: 02/17/09 Vuminum 1.88 0.020 0.0077 mgL 3.99 104 80-120 0.635 20 Calcium 4.15 1.0 0.0077 mgL 3.99 104 80-120 1.37 20 Valagnesium 4.03 1.0 0.0047 mgL 3.99 104 80-120 0.569 20 Alagnesium 4.03 1.00 0.020 mgL 0.399 104 80-120 0.502 20 Alagnesium 2.09 1.0 0.020 mgL 3.99 104 80-120 0.502 20 Alagnesium 2.09 1.0 0.020 mgL 3.99 73.3 112 75-125 1.63 20	Iron	2.05	0.050	0.0047	mg/L	2.00		102	80-120			
Arbassium 2.08 1.0 0.028 mg/L 2.00 1.04 80-120 Sodium 3.71 1.0 0.020 mg/L 3.99 93.0 80-120 LCS Dup (B9B1706-BSD1) Prepared & Analyzed: 02/17/09 Vuminum 1.88 0.020 0.00077 mg/L 2.00 93.8 80.120 0.635 20 Sadium 4.15 1.0 0.0077 mg/L 2.00 104 80-120 0.197 20 Sadium 4.05 1.0 0.0047 mg/L 2.00 104 80-120 0.197 20 Anganesium 4.03 1.0 0.045 mg/L 2.00 104 80-120 0.569 20 Anaryseine 0.20 0.00047 mg/L 2.00 104 80-120 0.502 20 Matrix Spike (B9B1706-MS1) Surgerseine mg/L 2.00 e0.020 97.3 112 75-125 5 5 5 5 5 <td< td=""><td>Magnesium</td><td>4.01</td><td>1.0</td><td>0.045</td><td>mg/L</td><td>3.99</td><td></td><td>100</td><td>80-120</td><td></td><td></td><td></td></td<>	Magnesium	4.01	1.0	0.045	mg/L	3.99		100	80-120			
Sodium 3.71 1.0 0.020 mg/L 3.99 93.0 80-120 CS Dup (B9B1706-BSD1) Prepared & Analyzet: 02/17/09 0.635 20 Valacium 1.88 0.020 0.00017 mg/L 2.00 93.8 80-120 0.635 20 Valacium 4.15 1.0 0.0077 mg/L 3.99 104 80-120 0.197 20 Yagnesium 4.03 1.0 0.0047 mg/L 3.99 104 80-120 0.568 20 Adarganesium 4.03 1.0 0.048 mg/L 3.99 104 80-120 0.583 20 Valassium 2.09 1.0 0.020 mg/L 3.99 104 80-120 0.502 20 Valassium 2.09 1.0 0.028 mg/L 2.00 104 80-120 1.63 20 Valarium 1.95 0.02017 mg/L 2.00 <0.020	Manganese	0.411	0.020	0.00048	mg/L	0.399		103	80-120			
CS Dup (B9B1706-BSD1) Prepared & Analyzed: 02/17/09 Murninum 1.88 0.020 0.0017 mg/L 2.00 93.8 80-120 0.635 20 Salcium 4.15 1.0 0.0077 mg/L 3.99 104 80-120 0.197 20 ron 2.08 0.650 0.0047 mg/L 3.99 104 80-120 0.569 20 Alagnesium 4.03 1.0 0.045 mg/L 3.99 104 80-120 0.683 20 Alagnesium 2.09 1.0 0.028 mg/L 0.399 104 80-120 0.602 20 Alagnesium 3.77 1.0 0.020 mg/L 3.99 94.5 80-120 1.63 20 Murinum 1.95 0.020 0.00017 mg/L 3.99 7.3 112 75-125 Vatrix Spike (B9B1706-MS1) Source: 0.0007 mg/L 3.99 2.66 106 75-125 Vatr	Potassium	2.08	1.0	0.028	mg/L	2.00		104	80-120			
Numinum1.880.0200.00017mg/L2.0093.880-1200.63520Jalcium4.151.00.0077mg/L3.9910480-1200.19720Janganesium4.031.00.045mg/L2.0010480-1200.56920Janganesium4.031.00.028mg/L0.39910480-1200.56920Janganesium2.091.000.028mg/L0.39910480-1200.56920Variassium2.091.000.028mg/L2.0010480-1200.56920Variassium2.091.000.028mg/L2.0010480-1200.56920Variassium2.091.000.028mg/L2.0010480-1200.56920Variassium2.091.000.028mg/L3.9910480-1200.56920Variassium1.950.0200.0017mg/L3.997.517.5125555Variassium2.050.0500.0048mg/L3.992.5610675-125555Variassium5.81.00.028mg/L3.995.816375-12555555Variassium5.81.00.024mg/L3.995.816375-1255555555555<	Sodium	3.71	1.0	0.020	mg/L	3.99		93.0	80-120			
Sale 4.15 1.0 0.0077 ng/L 3.99 104 80-120 0.197 20 Aagnesium 4.03 1.0 0.0047 ng/L 3.99 104 80-120 0.197 20 Aagnesium 4.03 1.0 0.045 ng/L 3.99 101 80-120 0.569 20 Aarganese 0.415 0.020 0.0048 ng/L 0.399 104 80-120 0.569 20 Potassium 2.09 1.0 0.028 mg/L 2.00 104 80-120 0.502 20 Matrix Spike (B9B1706-MS1) Surver: William 90.20 mg/L 3.99 73.3 10.4 80-120 1.63 20 Muminum 1.95 0.020 0.00017 mg/L 2.00 <0.050 101 75-125 5 5 Jaciatum 7.5 0.020 0.00017 mg/L 2.00 <0.050 101 75-125 5 5 5 Jaciatum 2.99 1.0 0.0045 mg/L 2.00 <	LCS Dup (B9B1706-BSD1)					Prepared	& Analyze	ed: 02/17/0)9			
ron 2.08 0.050 0.0047 mg/L 2.00 104 80-120 1.37 20 Aagnesium 4.03 1.0 0.045 mg/L 3.99 101 80-120 0.569 20 Aagnese 0.415 0.020 0.0048 mg/L 0.399 104 80-120 0.569 20 Potassium 2.09 1.0 0.028 mg/L 2.00 104 80-120 0.502 20 Sodium 3.77 1.0 0.020 mg/L 3.99 94.5 80-120 1.63 20 Matrix Spike (B9B1706-MS1) Surger Solitan 1.95 0.020 0.0017 mg/L 2.00 <0.020	Aluminum	1.88	0.020	0.00017	mg/L	2.00		93.8	80-120	0.635	20	
Adagenesium 4.03 1.0 0.045 ng/L 3.99 101 80-120 0.569 20 Adagenese 0.415 0.020 0.00048 ng/L 0.399 104 80-120 0.683 20 Potassium 2.09 1.0 0.020 mg/L 2.00 104 80-120 0.502 20 Sodium 3.77 1.0 0.020 mg/L 3.99 94.5 80-120 1.63 20 Mutrix Spike (B9B1706-MS1) Surver: 991260-01 mg/L 3.99 73.3 112 75-125 75 Vuminum 1.95 0.020 0.0017 mg/L 3.99 73.3 112 75-125 75 Adagenesium 2.99 1.0 0.020 mg/L 3.99 25.6 106 75-125 75 Adagenesium 2.99 1.0 0.028 mg/L 3.99 23.6 100 75-125 75 Adatagenesium 5.99 0.020 0.0047 mg/L 3.99 23.6 103 75-125 75 7	Calcium	4.15	1.0	0.0077	mg/L	3.99		104	80-120	0.197	20	
Adaganese 0.415 0.020 0.0048 mg/L 0.399 104 80-120 0.883 20 Potassium 2.09 1.0 0.028 mg/L 2.00 104 80-120 0.502 20 Sodium 3.77 1.0 0.020 mg/L 3.99 94.5 80-120 1.63 20 Matrix Spike (B9B1706-MS1) Source: 0901260-01 Prepared & Analyzed: 02/17/05 75-125 5	Iron	2.08	0.050	0.0047	mg/L	2.00		104	80-120	1.37	20	
Addassium 2.09 1.0 0.028 mg/L 2.00 1.04 80-120 0.502 20 Sodium 3.77 1.0 0.020 mg/L 3.99 94.5 80-120 1.63 20 Matrix Spike (B9B1706-MS1) Prepared & Analyzet: 02/17/09 Numinum 1.95 0.020 0.00017 mg/L 2.00 <0.020 97.5 75-125 75-125 Salcium 77.8 1.0 0.0077 mg/L 2.00 <0.020 97.5 75-125 75-125 Jacinum 2.99 1.05 0.0077 mg/L 3.99 2.56 106 75-125 Jaganese 0.78 0.02 0.0047 mg/L 3.99 2.56 106 75-125 Sodium 5.38 1.0 0.028 mg/L 3.99 2.58 100 75-125 M3 Sodium 5.99 2.0 0.048 mg/L 3.99 5.88 153 75-125 M3	Magnesium	4.03	1.0	0.045	mg/L	3.99		101	80-120	0.569	20	
Sodium 3.77 1.0 0.020 ng/L 3.99 94.5 80-120 1.63 20 Matrix Spike (B9B1706-MS1) Prepared & Analyzet: 02/17/07 Numinum 1.95 0.020 0.00017 mg/L 3.99 73.3 112 75-125	Manganese	0.415	0.020	0.00048	mg/L	0.399		104	80-120	0.883	20	
Atrix Spike (B9B1706-MS1) Source: 0901260-01 Prepared & Analyzed: 02/17/09 Muminum 1.95 0.020 0.00017 mg/L 2.00 <0.020	Potassium		1.0	0.028	mg/L			104	80-120	0.502		
Numinum 1.95 0.020 0.00017 mg/L 2.00 <0.020	Sodium	3.77	1.0	0.020	mg/L	3.99		94.5	80-120	1.63	20	
Calcium 77.8 1.0 0.0077 mg/L 3.99 73.3 112 75-125 ron 2.05 0.050 0.0047 mg/L 2.00 <0.050	Matrix Spike (B9B1706-MS1)	S	ource:	0901260-0	1	Prepared	& Analyze	ed: 02/17/0)9			
ron2.050.0500.0047mg/L2.00<0.05010175-125Maganesium29.91.00.045mg/L3.9925.610675-125Manganese0.7880.0200.00048mg/L0.3990.38810075-125Potassium5.381.00.028mg/L2.003.0411775-125Sodium59.92.00.040mg/L3.9953.815375-125M3Matrix Spike Dup (B9B1706-MSD1)Surce: 09U1260-01Prepared & Analyzed:02/17/USM3Adaganesium1.970.0200.0017mg/L2.00<0.020	Aluminum			0.00017	mg/L			97.5	75-125			
Magnesium 29.9 1.0 0.045 mg/L 3.99 25.6 106 75-125 Manganese 0.788 0.020 0.00048 mg/L 0.399 0.388 100 75-125 Potassium 5.38 1.0 0.028 mg/L 2.00 3.04 117 75-125 Sodium 5.9 2.0 0.040 mg/L 3.99 53.8 153 75-125 M3 Matrix Spike Dup (B9B1706-MSD1) Surce: 0901260-01 Prepared & Analyzed: 02/17/09 M3 Muminum 1.97 0.020 0.00017 mg/L 2.00 <0.020	Calcium				-							
Manganese 0.788 0.020 0.00048 mg/L 0.399 0.388 100 75-125 Potassium 5.38 1.0 0.028 mg/L 2.00 3.04 117 75-125 M3 Sodium 59.9 2.0 0.040 mg/L 3.99 53.8 153 75-125 M3 Matrix Spike Dup (B9B1706-MSD1) Source: 0901260-01 Prepared & Analyzed: 02/17/09 M3 Numinum 1.97 0.020 0.00017 mg/L 2.00 <0.020	Iron				-							
Sodium 5.38 1.0 0.028 mg/L 2.00 3.04 117 75-125 M3 Sodium 59.9 2.0 0.040 mg/L 3.99 53.8 153 75-125 M3 Matrix Spike Dup (B9B1706-MSD1) Source: 0901260-01 Prepared & Analyzed: 02/17/09 Numinum 1.97 0.020 0.00017 mg/L 2.00 <0.020 98.4 75-125 0.954 20 Calcium 79.2 1.0 0.0077 mg/L 3.99 73.3 148 75-125 0.327 20 Magnesium 3.04 1.0 0.045 mg/L 3.99 25.6 119 75-125 1.75 20 Magnese 0.798 0.020 0.0048 mg/L 0.399 0.388 103 75-125 1.23 20	Magnesium				-							
Sodium 59.9 2.0 0.040 mg/L 3.99 53.8 153 75-125 M3 Matrix Spike Dup (B9B1706-MSD1) Source: 0901260-01 Prepared & Analyzed: 02/17/09 98.4 75-125 0.954 20 Muminum 1.97 0.020 0.00017 mg/L 2.00 <0.020 98.4 75-125 0.954 20 Calcium 79.2 1.0 0.0077 mg/L 3.99 73.3 148 75-125 1.86 20 M3 Calcium 79.2 1.0 0.0047 mg/L 2.00 <0.050 101 75-125 1.86 20 M3 Aggnesium 3.04 1.0 0.045 mg/L 3.99 25.6 119 75-125 1.75 20 Magnese 0.798 0.020 0.0048 mg/L 0.399 0.388 103 75-125 1.23 20	Manganese											
Matrix Spike Dup (B9B1706-MSD1) Source: 0901260-01 Prepared & Analyzed: 02/17/09 Numinum 1.97 0.020 0.00017 mg/L 2.00 <0.020	Potassium											
Numinum 1.97 0.020 0.00017 mg/L 2.00 <0.020 98.4 75-125 0.954 20 Calcium 79.2 1.0 0.0077 mg/L 3.99 73.3 148 75-125 1.86 20 M3 ron 2.05 0.050 0.0047 mg/L 2.00 <0.050					-							M3
Calcium 79.2 1.0 0.0077 mg/L 3.99 73.3 148 75-125 1.86 20 M3 ron 2.05 0.050 0.0047 mg/L 2.00 <0.050	Matrix Spike Dup (B9B1706-MSD1)					•	•					
ron 2.05 0.050 0.0047 mg/L 2.00 <0.050 101 75-125 0.327 20 /lagnesium 30.4 1.0 0.045 mg/L 3.99 25.6 119 75-125 1.75 20 /langanese 0.798 0.020 0.00048 mg/L 0.399 0.388 103 75-125 1.23 20	Aluminum											
Magnesium30.41.00.045mg/L3.9925.611975-1251.7520Manganese0.7980.0200.00048mg/L0.3990.38810375-1251.2320	Calcium				-							M3
Manganese 0.798 0.020 0.00048 mg/L 0.399 0.388 103 75-125 1.23 20	Iron				-							
	Magnesium				-							
otassium 5.44 1.0 0.028 mg/L 2.00 3.04 120 75-125 1.13 20	Manganese											
	Potassium	5.44	1.0	0.028	mg/L	2.00	3.04	120	75-125	1.13	20	

Legend Technical Services, Inc.



4700 W 77th St Project Number: 23/19-0B05GWAS330 Work Order #: 09013 Missionalis MN 55405 Project Massaure Mis Market Nelson Poise Project Massaure Mission	Barr Engineering Co.	Project:	23/19-0B05		
Missionalia MN 55405 Decision Manager Ma Marta National Decision D	4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435Project Manager: Ms. Marta NelsonDate Reported: 06/04.	Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9B1706 - EPA 200.7/3005A Digestion											
Matrix Spike Dup (B9B1706-MSD1) Source: 0901260-01					Prepared	l: 02/17/09	Analyzed	1: 02/18/09)		
Sodium	60.4	2.0	0.040	mg/L	3.99	53.8	166	75-125	0.878	20	M3





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

WET CHEMISTRY - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9B1606 - General Prep											
Blank (B9B1606-BLK1)					Prepared	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	< 10	10		mg/L							
Duplicate (B9B1606-DUP1)	S	ource:	0901260-0)1	Prepared	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	454	10		mg/L		444			2.23	10	
Reference (B9B1606-SRM1)					Prepared	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	24.0	10		mg/L	23.9		100	94.6-105.4			
Batch B9B1613 - General Prep											
Blank (B9B1613-BLK1)					Preparec	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	< 10	10		mg/L							
Duplicate (B9B1613-DUP1)	S	ource:	0901301-0)6	Preparec	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	465	10		mg/L		422			9.70	10	
Reference (B9B1613-SRM1)					Preparec	& Analyz	ed: 02/16	/09			
Total Dissolved Solids	23.0	10		mg/L	23.9		96.2	94.6-105.4			
Batch B9B2507 - General Prep											
Blank (B9B2507-BLK1)					Prepared	& Analyz	ed: 02/25	/09			
Total Organic Carbon	< 1.5	1.5	0.38	mg/L							
Duplicate (B9B2507-DUP1)	S	ource:	0901301-0)1	Prepared	& Analyz	ed: 02/25	/09			
Total Organic Carbon	0.749	1.5	0.38	mg/L		<1.5			NA	20	QR-2





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

WET CHEMISTRY - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9B2508 - General Prep											
Blank (B9B2508-BLK1)					Prepared	& Analyze	ed: 02/25/	09			
Bicarbonate as CaCO3	< 20	20		mg/L							
Duplicate (B9B2508-DUP1)	S	ource: ()901301-0 ⁻	1	Prepared	& Analyze	ed: 02/25/	09			
Bicarbonate as CaCO3	242	20		mg/L		204			17.0	20	
Reference (B9B2508-SRM1)					Prepared	: 02/25/09	Analyzed	d: 02/26/09)		
Bicarbonate as CaCO3	227	20		mg/L	224		101	90-110			





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANIONS 9056 - Quality Control Legend Technical Services, Inc.

					Spike	Source		%REC		%RPD	
Analyte	Result	RL	MDL	Units	Level	Result	%REC	Limits	%RPD	Limit	Notes
Batch B9B1607 - General Prep Dept 4											
Blank (B9B1607-BLK1)					Prepared	l & Analyze	ed: 02/16/	09			
Chloride	< 1.0	1.0	0.11	mg/L							
Fluoride	< 0.50	0.50	0.076	mg/L							
Phosphate	< 2.1	2.1	0.22	mg/L							
Sulfate	< 1.5	1.5	0.38	mg/L							
LCS (B9B1607-BS1)					Prepared	l & Analyze	ed: 02/16/	09			
Chloride	4.90	1.0	0.11	mg/L	5.00		98.0	85-120			
Fluoride	2.40	0.50	0.076	mg/L	2.50		96.0	80-120			
Phosphate	5.50	2.1	0.22	mg/L	5.00		110	80-120			
Sulfate	5.20	1.5	0.38	mg/L	5.00		104	81.5-120			
LCS Dup (B9B1607-BSD1)					Prepared	I & Analyze	ed: 02/16/	09			
Chloride	5.10	1.0	0.11	mg/L	5.00		102	85-120	4.00	15	
Fluoride	2.50	0.50	0.076	mg/L	2.50		100	80-120	4.08	15	
Phosphate	5.60	2.1	0.22	mg/L	5.00		112	80-120	1.80	15	
Sulfate	5.20	1.5	0.38	mg/L	5.00		104	81.5-120	0.00	20	
Matrix Spike (B9B1607-MS1)	S	ource:	0901301-1	0	Prepared & Analyzed: 02/16/09						
Chloride	5.20	1.0	0.11	mg/L	5.00	<1.0	104	80-120			
Fluoride	2.50	0.50	0.076	mg/L	2.50	<0.50	100	80-120			
Phosphate	6.00	2.1	0.22	mg/L	5.00	<2.1	120	80-120			
Sulfate	5.30	1.5	0.38	mg/L	5.00	<1.5	106	80-120			
Matrix Spike Dup (B9B1607-MSD1)	S	ource:	0901301-1	0	Prepared	I & Analyze	ed: 02/16/	09			
Chloride	5.00	1.0	0.11	mg/L	5.00	<1.0	100	80-120	3.92	15	
Fluoride	2.50	0.50	0.076	mg/L	2.50	<0.50	100	80-120	0.00	15	
Phosphate	5.20	2.1	0.22	mg/L	5.00	<2.1	104	80-120	14.3	20	
Sulfate	5.20	1.5	0.38	mg/L	5.00	<1.5	104	80-120	1.90	15	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Analytical Results - Quality Control Davy Laboratories, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch N/A - No Prep											
BLK (0901301-BLK)					Prepared:	Analyze	d: 02/20/0	9			
Ammonia as N	<0.19	0.19		mg/L		<0.19		-			
Nitrate/Nitrite as N	<0.90	0.90		mg/L		<0.90		-			

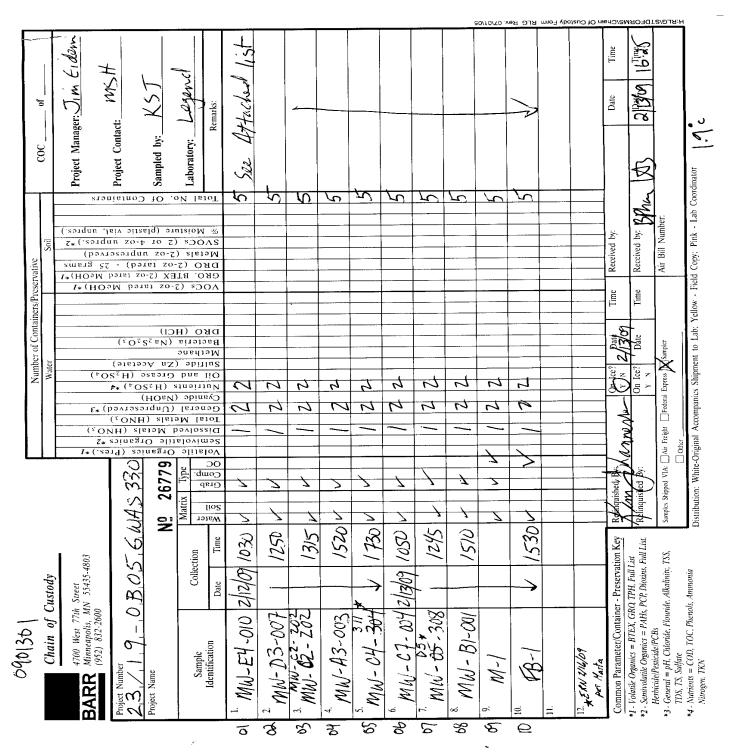


Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901301
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Notes and Definitions

- QR-2 Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.
- M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
- < Less than value listed
- dry Sample results reported on a dry weight basis
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
- MS Matrix Spike = Laboratory Fortified Matrix (LFM)





Legend Technical Services, Inc.



0901 301

Groundwater Sampling Details	-EIS		
23/19-0B05.03 GWAS 330 JMore Park			
Dakota County, MN			
Dakota County, Min			
Applytical Parameters	Method	Reporting	Comment
Analytical Parameters	Number	Limit (mg/L)	
	EPA 6010B	0.020	
Calcium	EPA 6010B	1.0	
Magnesium	EPA 6010B	1.0	
Iron .	EPA 6010B	0.050	
Manganese	EPA 6010B	0.020	
Sodium	EPA 6010B	1.0	
Potassium	EPA 6010B		
Chloride	EPA 9056 (M)	1.0	
Bicarbonate	SM 2320B (97)	20	calculation
Sulfate	EPA 9056 (M)	1.5	
Nitrate + Nitrite (as N)	SM 4500-NO3F	0.20	subcontract
Ammonia	EPA 350.1	1.0	subcontract
TOC	SM 5310C	1.5	
TDS	SM 2540 C (97)	10	
Phosphate	EPA 9056 (M)	2.1	
Fluoride	EPA 9056 (M)	0.50	
ield Parameters			
Temp			
Conductivity			
pH			
ORP			

P:\MpIs\23 MN\19\2319B05 UMore park environmental\WorkFiles\EIS Support\Implementation\Groundwater\Sampling Parameters

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June 04, 2009

REVISION

Ms. Marta Nelson Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435

Work Order Number: 0901983 RE: 23/19-0B05

This is a revised report. The details of the revision are listed in the case narrative on the following page.

Enclosed are the results of analyses for samples received by the laboratory on 04/10/09. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND, unless consumed in the analysis, for 30 days from the date of the original report and then discarded unless other arrangements are made.

MDH Certification #027-123-295

Prepared by, LEGEND TECHNICAL SERVICES, INC

> Terri Olson Client Manager II tolson@legend-group.com

Erica Nastrom QA/QC Coordinator enastrom@legend-group.com

Legend Technical Services, Inc.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-C2-202	0901983-01	Water	04/10/09 10:50	04/10/09 17:07
MW-C2-002	0901983-02	Water	04/10/09 12:20	04/10/09 17:07
MW-B1-001	0901983-03	Water	04/10/09 00:00	04/10/09 17:07

Shipping Container Informat	ion	
Default Cooler	Temperature (°C): 1.9	
Received on ice: Yes Received on melt water: No Custody seals: No	Temperature blank was present Ambient: No	Received on ice pack: No Acceptable (IH/ISO only): No

Case Narrative:

MN Certification does not apply to the bicarbonate, chloride, sulfate, phosphate, or fluoride analyses.

This report contains data that were produced by a subcontracted laboratory certified for the fields of testing performed. The ammonia as N and nitrate+nitrite as N analyses for the Clean Water Program were performed by Davy Laboratories, LaCrosse, WI, #055-999-151.

Phosphate recovery in the MS sample was below laboratory limits and the corresponding MS/MSD %RPD was above laboratory limits. Recoveries for this compound in the LCS/LCSD samples and the corresponding %RPD were within limits. The MS/MSD source sample was sample MW-C2-202.

At the client's request, this report was revised on June 4, 2009 to indicate that the metals were dissolved and not total. The values reported were unchanged.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager	: Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-202 (0901983-01) Water	Sampled: 04/1	0/09 10:5	0 Receiv	ved: 04/10/0	9 17:07					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2106	04/21/09	04/21/09	EPA 6010B (Dissolved)	
Calcium	86	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.13	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	28	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.025	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	2.5	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	24	1.0	0.020	mg/L	1	"	"	"	"	
MW-C2-002 (0901983-02) Water	Sampled: 04/1	0/09 12:2	0 Receiv	ved: 04/10/0	9 17:07					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2106	04/21/09	04/21/09	EPA 6010B (Dissolved)	
Calcium	94	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	35	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.25	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	2.0	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	24	1.0	0.020	mg/L	1	"	"	"	H	
MW-B1-001 (0901983-03) Water	Sampled: 04/1	0/09 00:0	0 Receiv	ved: 04/10/0	9 17:07					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2106	04/21/09	04/21/09	EPA 6010B (Dissolved)	
Calcium	66	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	23	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.077	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.3	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	17	1.0	0.020	mg/L	1	"	"	"	"	

LEGEND Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		Project	Number: Manager: WE	23/19-0B0 23/19-0B0 Ms. Marta T CHEMI chnical \$	5GWAS33 Nelson STRY				rk Order #: 0 e Reported: 0	9901983 96/04/09
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-202 (0901983-01) Water	Sampled: 04/10	/09 10:50	Receiv	ed: 04/10/0	9 17:07					
Bicarbonate as CaCO3	260	20		mg/L	1	B9D2211	04/22/09	04/22/09	SM 2320 B-97	
Total Dissolved Solids	410	10		mg/L	1	B9D1706	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	1.5	1.5	0.38	mg/L	1	B9D1605	04/16/09	04/20/09	SM 5310 C-00	
MW-C2-002 (0901983-02) Water	Sampled: 04/10	/09 12:20	Receive	ed: 04/10/0	9 17:07					
Bicarbonate as CaCO3	290	20		mg/L	1	B9D2211	04/22/09	04/22/09	SM 2320 B-97	
Total Dissolved Solids	440	10		mg/L	1	B9D1706	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	3.5	1.5	0.38	mg/L	1	B9D1605	04/16/09	04/20/09	SM 5310 C-00	
MW-B1-001 (0901983-03) Water	Sampled: 04/10	/09 00:00	Receive	ed: 04/10/0	9 17:07					
Bicarbonate as CaCO3	210	20		mg/L	1	B9D2211	04/22/09	04/22/09	SM 2320 B-97	
Total Dissolved Solids	330	10		mg/L	1	B9D1706	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	8.4	1.5	0.38	mg/L	1	B9D1605	04/16/09	04/20/09	SM 5310 C-00	



Barr Engineering Co.		Proje	ect:	23/19-0B	05					
4700 W 77th St		Proje	ect Number:	23/19-0B	05GWAS33	30		Wo	rk Order #:	0901983
Minneapolis, MN 55435		Proje	ect Manager	: Ms. Marta	a Nelson			Dat	e Reported:	06/04/09
			A		056					
		L	egend Te	echnical S	Services	, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-202 (0901983-01) Water	Sampled: 04/1	0/09 10:	50 Receiv	ed: 04/10/0	9 17:07					
Chloride	21	4.0	0.44	mg/L	4	B9D1409	04/14/09	04/14/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	04/14/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	M2, QR-04
Sulfate	50	6.0	1.5	mg/L	4	"	"	04/14/09	"	
MW-C2-002 (0901983-02) Water	Sampled: 04/1	0/09 12::	20 Receiv	ed: 04/10/0	9 17:07					
Chloride	45	5.0	0.55	mg/L	5	B9D1409	04/14/09	04/14/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	04/14/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	26	1.5	0.38	mg/L	1	"	"	"	"	
MW-B1-001 (0901983-03) Water	Sampled: 04/1	0/09 00:	00 Receiv	ed: 04/10/0	9 17:07					
Chloride	18	1.0	0.11	mg/L	1	B9D1409	04/14/09	04/14/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	12	1.5	0.38	mg/L	1	"	"	"	"	



Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435			t Number:	23/19-08 23/19-08 : Ms. Marta	05GWAS33	0				901983 6/04/09
				alytical R Laborato	esults ries, Inc.					
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C2-202 (0901983-01) Water	Sampled: 04/10	0/09 10:5	0 Receiv	ed: 04/10/0	9 17:07					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	10.5	0.05	0.02	mg/L	1	"		04/23/09	SM 4500 NO3-F-00	
MW-C2-002 (0901983-02) Water	Sampled: 04/10	0/09 12:20	0 Receiv	ed: 04/10/0	9 17:07					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	12.1	0.05	0.02	mg/L	1	"		04/23/09	SM 4500 NO3-F-00	
MW-B1-001 (0901983-03) Water	Sampled: 04/10	0/09 00:0	0 Receiv	ed: 04/10/0	9 17:07					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	9.20	0.05	0.02	mg/L	1	n	"	04/23/09	SM 4500 NO3-F-00	





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9D2106 - EPA 200.7/3005A D	Digestion										
Blank (B9D2106-BLK1)	•				Prepared	I & Analyze	ed: 04/21/0	09			
Aluminum	< 0.020	0.020	0.00017	mg/L							
Calcium	< 1.0	1.0	0.0077	mg/L							
Iron	< 0.050	0.050	0.0047	mg/L							
Magnesium	< 1.0	1.0	0.045	mg/L							
Manganese	< 0.020	0.020	0.00048	mg/L							
Potassium	< 1.0	1.0	0.028	mg/L							
Sodium	< 1.0	1.0	0.020	mg/L							
LCS (B9D2106-BS1)					Prepared	I & Analyze	ed: 04/21/0	09			
Aluminum	2.02	0.020	0.00017	mg/L	2.00		101	80-120			
Calcium	4.01	1.0	0.0077	mg/L	3.99		100	80-120			
Iron	2.00	0.050	0.0047	mg/L	2.00		100	80-120			
Magnesium	4.09	1.0	0.045	mg/L	3.99		102	80-120			
Manganese	0.405	0.020	0.00048	mg/L	0.399		102	80-120			
Potassium	1.84	1.0	0.028	mg/L	2.00		92.1	80-120			
Sodium	4.06	1.0	0.020	mg/L	3.99		102	80-120			
LCS Dup (B9D2106-BSD1)					Prepared	I & Analyze	ed: 04/21/0	09			
Aluminum	2.09	0.020	0.00017	mg/L	2.00		105	80-120	3.39	20	
Calcium	4.13	1.0	0.0077	mg/L	3.99		104	80-120	3.16	20	
Iron	2.08	0.050	0.0047	mg/L	2.00		104	80-120	3.98	20	
Magnesium	4.22	1.0	0.045	mg/L	3.99		106	80-120	3.16	20	
Manganese	0.417	0.020	0.00048	mg/L	0.399		105	80-120	2.98	20	
Potassium	1.90	1.0	0.028	mg/L	2.00		94.8	80-120	2.85	20	
Sodium	4.15	1.0	0.020	mg/L	3.99		104	80-120	2.19	20	
Matrix Spike (B9D2106-MS1)	S	ource:	0901983-0	1	Prepared	I & Analyze	ed: 04/21/0				
Aluminum	2.00	0.020	0.00017	mg/L	2.00	<0.020	100	75-125			
Calcium	89.6	1.0	0.0077	mg/L	3.99	85.6	101	75-125			
Iron	2.14	0.050	0.0047	mg/L	2.00	0.131	100	75-125			
Magnesium	32.0	1.0	0.045	mg/L	3.99	28.1	99.3	75-125			
Manganese	0.430	0.020	0.00048	mg/L	0.399	0.0245	102	75-125			
Potassium	4.54	1.0	0.028	mg/L	2.00	2.45	105	75-125			
Sodium	28.5	1.0	0.020	mg/L	3.99	24.1	111	75-125			
Matrix Spike Dup (B9D2106-MSD1)			0901983-0	1		I & Analyze					
Aluminum	2.03	0.020	0.00017	mg/L	2.00	<0.020	101	75-125	1.37	20	
Calcium	89.8	1.0	0.0077	mg/L	3.99	85.6	105	75-125	0.206	20	
Iron	2.17	0.050	0.0047	mg/L	2.00	0.131	102	75-125	1.18	20	
Magnesium	32.2	1.0	0.045	mg/L	3.99	28.1	103	75-125	0.459	20	
Manganese	0.437	0.020	0.00048	mg/L	0.399	0.0245	103	75-125	1.52	20	
Potassium	4.58	1.0	0.028	mg/L	2.00	2.45	106	75-125	0.783	20	

Legend Technical Services, Inc.



Barr Engineering Co.	Project: 23/19-0B05	
4700 W 77th St	Project Number: 23/19-0B05GWAS330	Work Order #: 0901983
Minneapolis, MN 55435	Project Manager: Ms. Marta Nelson	Date Reported: 06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte Batch B9D2106 - EPA 200.7/3005A Di	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Matrix Spike Dup (B9D2106-MSD1) Sodium	0	ource: (1.0)901983-0 0.020	1 mg/L	Prepared 3.99	l & Analyze 24.1	ed: 04/21/0 114)9 75-125	0.370	20	





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager	: Ms. Marta Nelson	Date Reported:	06/04/09

WET CHEMISTRY - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
	Result			Onito	LOVOI	Roount	/01/20	Linito	/0111	Luun	110103
Batch B9D1605 - General Prep											
Blank (B9D1605-BLK1)					Prepared	1: 04/16/09	Analyzed	d: 04/20/09	9		
Total Organic Carbon	< 1.5	1.5	0.38	mg/L							
Duplicate (B9D1605-DUP1)	S	ource:	0901983-0)1	Prepared	1: 04/16/09	Analyzed	d: 04/20/09)		
Total Organic Carbon	1.42	1.5	0.38	mg/L		1.51			6.38	20	
Batch B9D1706 - General Prep											
Blank (B9D1706-BLK1)					Prepared	l & Analyze	ed: 04/17/	09			
Total Dissolved Solids	< 10	10		mg/L		-					
Duplicate (B9D1706-DUP1)	S	ource:	0901983-0)1	Prepared	& Analyze	ed: 04/17/	09			
Total Dissolved Solids	425	10		mg/L		409			3.84	10	
Reference (B9D1706-SRM1)					Prepared	& Analyze	ed: 04/17/	09			
Total Dissolved Solids	22.0	10		mg/L	22.3		98.7	94.6-105.4			
Batch B9D2211 - General Prep											
Blank (B9D2211-BLK1)					Prepared	l & Analyze	ed: 04/22/	09			
Bicarbonate as CaCO3	< 20	20		mg/L		Ē					
Duplicate (B9D2211-DUP1)	S	ource:	0901983-0)1	Prepared	& Analyze	ed: 04/22/	09			
Bicarbonate as CaCO3	254	20		mg/L		264			3.86	20	





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANIONS 9056 - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9D1409 - General Prep Dept 4											
Blank (B9D1409-BLK1)					Prepared	d & Analyze	ed: 04/14/	09			
Chloride	< 1.0	1.0	0.11	mg/L	. repared	2 01 7 11 101 9 21					
Fluoride	< 0.50	0.50	0.076	mg/L							
Phosphate	< 2.1	2.1	0.22	mg/L							
Sulfate	< 1.5	1.5	0.38	mg/L							
LCS (B9D1409-BS1)					Prepared	d & Analyze	ed: 04/14/	09			
Chloride	5.50	1.0	0.11	mg/L	5.00		110	85-120			
Fluoride	2.80	0.50	0.076	mg/L	2.50		112	80-120			
Phosphate	5.10	2.1	0.22	mg/L	5.00		102	80-120			
Sulfate	5.40	1.5	0.38	mg/L	5.00		108	81.5-120			
LCS Dup (B9D1409-BSD1)					Prepared	d & Analyze	ed: 04/14/	09			
Chloride	5.50	1.0	0.11	mg/L	5.00		110	85-120	0.00	15	
Fluoride	2.90	0.50	0.076	mg/L	2.50		116	80-120	3.51	15	
Phosphate	5.10	2.1	0.22	mg/L	5.00		102	80-120	0.00	15	
Sulfate	5.20	1.5	0.38	mg/L	5.00		104	81.5-120	3.77	20	
Matrix Spike (B9D1409-MS1)	S	ource:	0901983-0)1	Prepared & Analyzed: 04/14/09						
Fluoride	2.90	0.50	0.076	mg/L	2.50	<0.50	112	80-120			
Phosphate	3.70	2.1	0.22	mg/L	5.00	<2.1	74.0	80-120			M2
Matrix Spike (B9D1409-MS2)	S	ource:	0901983-0	01	Prepared	d & Analyze	ed: 04/14/	09			
Chloride	42.8	4.0	0.44	mg/L	20.0	21.2	108	80-120			
Sulfate	70.4	6.0	1.5	mg/L	20.0	50.4	100	80-120			
Matrix Spike Dup (B9D1409-MSD1)	S	ource:	0901983-0)1	Prepared	d & Analyze	ed: 04/14/	09			
Fluoride	2.90	0.50	0.076	mg/L	2.50	<0.50	112	80-120	0.00	15	
Phosphate	4.80	2.1	0.22	mg/L	5.00	<2.1	96.0	80-120	25.9	20	QR-04
Matrix Spike Dup (B9D1409-MSD2)	S	ource:	0901983-0)1	Prepareo	d & Analyze	ed: 04/14/	09			
Chloride	43.6	4.0	0.44	mg/L	20.0	21.2	112	80-120	1.85	15	
Sulfate	70.0	6.0	1.5	mg/L	20.0	50.4	98.0	80-120	0.570	15	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Analytical Results - Quality Control Davy Laboratories, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch N/A - No Prep											
BLK (0901983-BLK)					Prepared:	Analyze	d: 04/20/0	9			
Ammonia as N	<0.19	0.19		mg/L		<0.19		-			
Nitrate/Nitrite as N	<0.05	0.05		mg/L		<0.05		-			

Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0901983
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

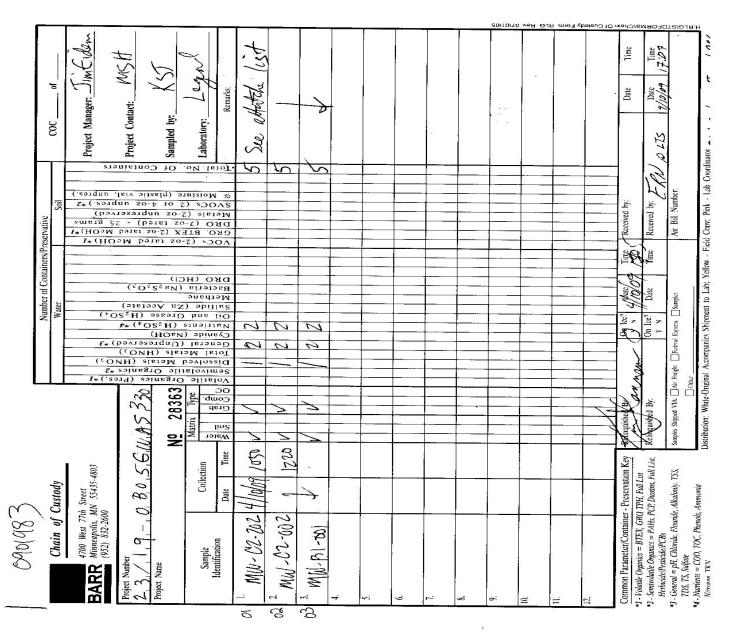
Notes and Definitions

QR-04 The RPD value for the MS/MSD was outside of QC acceptance limits. Data was accepted based on LCS and/or LCSD recovery and/or RPD values.

- M2 Matrix spike recovery was low, the associated blank spike recovery was acceptable.
- < Less than value listed
- dry Sample results reported on a dry weight basis
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
- MS Matrix Spike = Laboratory Fortified Matrix (LFM)









0901983

3/19-0B05.03 GWAS 330			
akota County, MN			
	Method	 Deneties	
Analytical Parameters	Number	Reporting	Comment
Aluminum	EPA 6010B	Limit (mg/L)	
Calcium	EPA 6010B	1.0	
Magnesium	EPA 6010B		· · · · · · · · · · · · · · · · · · ·
Iron	EPA 6010B	1.0	<u> </u>
Manganese	EPA 6010B	0.050	
Sodium		0.020	
Potassium	EPA 6010B	1.0	
Chloride	EPA 6010B		
	EPA 9056 (M)	1.0	
Bicarbonate	SM 2320B (97)	20	calculation
Sullate	EPA 9056 (M)	1.5	
Nitrate + Nitrite (as N)	SM 4500-NO3F	0.20	subcontract
Ammonia	EPA 350.1	1.0	subcontract
TOC	SM 5310C	1.5	
TDS	SM 2540 C (97)	10	· ·
Phosphate	EPA 9056 (M)	2.1	······································
Fluoride	EPA 9056 (M)	0.50	<u> </u>
eld Parameters		·	· · · · · · · · · · · · · · · · · · ·
Temp	× × × × × × × ×		<u></u>
Conductivity			· · · · · · · · · · · · · · · · · · ·
pH			
ORP			

P:\Mpls\23 MN\19\2319B05 UMore park environmental\WorkFiles\EIS Support\Implementation\Groundwater\Sampling Parameters

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Legend Technical Services, Inc.

Pan P005329



June 04, 2009

REVISION

Ms. Marta Nelson Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435

Work Order Number: 0902035 RE: 23/19-0B05

This is a revised report. The details of the revision are listed in the case narrative on the following page.

Enclosed are the results of analyses for samples received by the laboratory on 04/15/09. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND, unless consumed in the analysis, for 30 days from the date of the original report and then discarded unless other arrangements are made.

MDH Certification #027-123-295

Prepared by, LEGEND TECHNICAL SERVICES, INC

> Terri Olson Client Manager II tolson@legend-group.com

Erica Nastrom QA/QC Coordinator enastrom@legend-group.com

Legend Technical Services, Inc.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-E2-209	0902035-01	Water	04/13/09 10:55	04/15/09 15:25
MW-E2-009	0902035-02	Water	04/13/09 12:10	04/15/09 15:25
MW-E2-305	0902035-03	Water	04/13/09 13:55	04/15/09 15:25
MW-E4-010	0902035-04	Water	04/13/09 16:05	04/15/09 15:25
MW-D3-007	0902035-05	Water	04/14/09 10:40	04/15/09 15:25
MW-D5-308	0902035-06	Water	04/14/09 13:10	04/15/09 15:25
FB-1	0902035-07	Water	04/14/09 13:35	04/15/09 15:25
MW-A3-003	0902035-08	Water	04/14/09 15:40	04/15/09 15:25
MW-C7-004	0902035-09	Water	04/15/09 10:10	04/15/09 15:25
MW-A6-006	0902035-10	Water	04/15/09 11:50	04/15/09 15:25
MW-C4-311	0902035-11	Water	04/15/09 13:55	04/15/09 15:25
M-1	0902035-12	Water	04/15/09 00:00	04/15/09 15:25

Shipping Container Information								
Default Cooler	Temperature (°C): 2.4							
Received on ice: Yes Received on melt water: No Custody seals: No	Temperature blank was present Ambient: No	Received on ice pack: No Acceptable (IH/ISO only): No						

Case Narrative:

MN Certification does not apply to the bicarbonate, chloride, sulfate, phosphate, or fluoride analyses.

This report contains data that were produced by a subcontracted laboratory certified for the fields of testing performed. The ammonia as N and nitrate+nitrite as N analyses for the Clean Water Program were performed by Davy Laboratories, LaCrosse, WI, #055-999-151.

Calcium and sodium recoveries in the MS for batch B8D2306 exceeded the laboratory control limits due to the analyte concentration being disproportionate to the spike level. Recoveries in the LCS/LCSD/MSD samples and the corresponding RPDs were within limits. The source sample used for this batch was MW-E2-209.

At the client's request, this report was revised on June 4, 2009 to indicate that the metals were dissolved and not total. The values reported were unchanged.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS Legend Technical Services, Inc.

Arrelate	D	DI	MDI	L La Da	Dilutio	Datak	Davasa	Analizati	Mathaal	Natas
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E2-209 (0902035-01) Water	Sampled: 04/1	3/09 10:	55 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	58	1.0	0.0077	mg/L	1	"	"	"	"	M3
Iron	0.91	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	20	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.16	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.4	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	32	1.0	0.020	mg/L	1		"	"	"	M3
MW-E2-009 (0902035-02) Water	Sampled: 04/1	3/09 12:′	10 Receiv	ed: 04/15/0	9 15:25					
Aluminum	0.17	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	62	1.0	0.0077	mg/L	1	"	"	"		
Iron	0.64	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	19	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.94	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	3.4	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	140	10	0.20	mg/L	10	"	"	04/27/09	"	
MW-E2-305 (0902035-03) Water	Sampled: 04/1	3/09 13:	55 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	70	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.29	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	20	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.19	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	2.5	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	43	10	0.20	mg/L	10	"	"	04/27/09	H	
MW-E4-010 (0902035-04) Water	Sampled: 04/1	3/09 16:0	05 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	92	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	0.12	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	32	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.083	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.6	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	7.3	1.0	0.020	mg/L	1	"	"	"	"	
MW-D3-007 (0902035-05) Water	Sampled: 04/1	4/09 10:4	40 Receiv	ved: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	83	1.0	0.0077	mg/L	1	"	"	"	(13301760)	

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		•	ct Number:	23/19-0B 23/19-0B : Ms. Marta	05GWAS33	30			k Order #: e Reported:	0902035 06/04/09
				D META						
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-D3-007 (0902035-05) Water	Sampled: 04/1	4/09 10:4	0 Receiv	ed: 04/15/0	9 15:25					
Iron	0.066	0.050	0.0047	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B	
Magnesium	29	1.0	0.045	mg/L	1	"	"	"	(Dissolved) "	
Manganese	0.084	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.9	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	15	1.0	0.020	mg/L	1	"	"	"	"	
MW-D5-308 (0902035-06) Water	Sampled: 04/1	4/09 13:1	0 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	78	1.0	0.0077	mg/L	1	"	"	"		
Iron	0.059	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	24	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.099	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.2	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	21	1.0	0.020	mg/L	1	"	"	"	"	
FB-1 (0902035-07) Water Samp	led: 04/14/09 13	:35 Re	ceived: 04/	15/09 15:2	5					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	<1.0	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	<1.0	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	<0.020	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	<1.0	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	<1.0	1.0	0.020	mg/L	1	"	"	"	"	
MW-A3-003 (0902035-08) Water	Sampled: 04/14	4/09 15:4	0 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	83	1.0	0.0077	mg/L	1	"	"	"	"	
Iron	<0.050	0.050	0.0047	mg/L	1			"		
Magnesium Manganese	28 0.023	1.0 0.020	0.045 0.00048	mg/L	1 1					
Potassium	0.023	1.0	0.00048	mg/L mg/L	1	"		"	"	
Sodium	4.8	1.0	0.020	mg/L	1	"	"	"	"	
MW-C7-004 (0902035-09) Water				red: 04/15/0	-					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	99	1.0	0.0077	mg/L	1	"	"	"	(DISSUIVED) "	
Iron	0.15	0.050	0.0047	mg/L	1	"	"	"	"	
Magnesium	28	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	<0.020	0.020	0.00048	mg/L	1	"	"	"	"	

Legend Technical Services, Inc.

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		,	ect: ect Number: ect Manager		05GWAS33	30		Work Order #: 0902035 Date Reported: 06/04/09		
			ISSOLVE egend Te							
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-C7-004 (0902035-09) Water	Sampled: 04/1	5/09 10: <i>*</i>	10 Receiv	ed: 04/15/0	9 15:25					
Potassium	1.2	1.0	0.028	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B	
Sodium	13	1.0	0.020	mg/L	1	"	"	"	(Dissolved) "	
MW-A6-006 (0902035-10) Water	Sampled: 04/1	5/09 11:	50 Receiv	ed: 04/15/0	9 15:25					
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B	
Calcium	83	1.0	0.0077	mg/L	1	"	"	"	(Dissolved) "	
Iron	0.069	0.050	0.0047	mg/L	1	"	"	"		
Magnesium	29	1.0	0.045	mg/L	1	"	"			
Manganese	<0.020	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.6	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	6.7	1.0	0.020	mg/L	1	"	"	"	"	
MW-C4-311 (0902035-11) Water	Sampled: 04/1	5/09 13:	55 Receiv	ed: 04/15/0	9 15:25					
Aluminum	0.38	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	37	1.0	0.0077	mg/L	1	"	"			
Iron	0.50	0.050	0.0047	mg/L	1	"	"			
Magnesium	19	1.0	0.045	mg/L	1	"	"	"	"	
Manganese	0.17	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.1	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	51	10	0.20	mg/L	10	"	"	04/27/09	"	
M-1 (0902035-12) Water Sample	ed: 04/15/09 00:	00 Rec	eived: 04/1	5/09 15:25						
Aluminum	<0.020	0.020	0.00017	mg/L	1	B9D2306	04/23/09	04/23/09	EPA 6010B (Dissolved)	
Calcium	99	1.0	0.0077	mg/L	1	"	"			
Iron	0.18	0.050	0.0047	mg/L	1	"	"		"	
Magnesium	28	1.0	0.045	mg/L	1	"	"		"	
Manganese	<0.020	0.020	0.00048	mg/L	1	"	"	"	"	
Potassium	1.2	1.0	0.028	mg/L	1	"	"	"	"	
Sodium	13	1.0	0.020	mg/L	1	"	"	"	"	



L E G E N D Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435			Number:	23/19-0B0 23/19-0B0 Ms. Marta	5GWAS33	30			rk Order #: 09 e Reported: 06	02035 /04/09
		Leç		T CHEMI chnical S	-	, Inc.			-	
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E2-209 (0902035-01) Water	Sampled: 04/13	/09 10:55	Receive	ed: 04/15/09	9 15:25					
Bicarbonate as CaCO3	280	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	H1
Total Dissolved Solids	280	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	14	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-E2-009 (0902035-02) Water	Sampled: 04/13	/09 12:10	Receive	ed: 04/15/09	9 15:25					
Bicarbonate as CaCO3	380	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	H1
Total Dissolved Solids	660	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	140	15	3.8	mg/L	10	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-E2-305 (0902035-03) Water	Sampled: 04/13	/09 13:55	Receive	ed: 04/15/0	9 15:25					
Bicarbonate as CaCO3	260	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	H1
Total Dissolved Solids	430	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	5.2	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-E4-010 (0902035-04) Water	Sampled: 04/13	/09 16:05	Receive	ed: 04/15/09	9 15:25					
Bicarbonate as CaCO3	250	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	H1
Total Dissolved Solids	430	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	1.8	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-D3-007 (0902035-05) Water	Sampled: 04/14	/09 10:40	Receive	ed: 04/15/0	9 15:25					
Bicarbonate as CaCO3	260	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	
Total Dissolved Solids	440	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	3.2	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-D5-308 (0902035-06) Water	Sampled: 04/14	/09 13:10	Receive	ed: 04/15/0	9 15:25					
Bicarbonate as CaCO3	270	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	
Total Dissolved Solids	380	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	7.0	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
FB-1 (0902035-07) Water Samp	led: 04/14/09 13:	35 Rece	eived: 04/	15/09 15:25						
Bicarbonate as CaCO3	<20	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	
Total Dissolved Solids	23	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	2.2	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-A3-003 (0902035-08) Water	Sampled: 04/14	/09 15:40	Receive	ed: 04/15/09	9 15:25					
Bicarbonate as CaCO3	280	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	
Total Dissolved Solids	370	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	<1.5	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	
MW-C7-004 (0902035-09) Water	Sampled: 04/15	/09 10:10	Receive	ed: 04/15/0	9 15:25					
Bicarbonate as CaCO3	320	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97	
Total Dissolved Solids	430	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97	
Total Organic Carbon	8.8	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00	

Legend Technical Services, Inc.

Barr Engineering Co.		Project	:	23/19-0B0	5								
4700 W 77th St		Project	Number:	23/19-0B0	5GWAS33	30		Wo	rk Order #:	0902035			
Minneapolis, MN 55435		Project	Manager:	Ms. Marta	Nelson			Dat	e Reported:	06/04/09			
			WE	Т СНЕМІ	STRY								
	Legend Technical Services, Inc.												
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
MW-A6-006 (0902035-10) Water	Sampled: 04/15	/09 11:50	Receive	ed: 04/15/0	9 15:25								
Bicarbonate as CaCO3	260	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97				
Total Dissolved Solids	360	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97				
Total Organic Carbon	3.7	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00				
MW-C4-311 (0902035-11) Water	Sampled: 04/15	/09 13:55	Receiv	ed: 04/15/0	9 15:25								
Bicarbonate as CaCO3	260	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97				
Total Dissolved Solids	360	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97				
Total Organic Carbon	11	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00				
M-1 (0902035-12) Water Sample	ed: 04/15/09 00:0	0 Recei	ved: 04/1	5/09 15:25									
Bicarbonate as CaCO3	310	20		mg/L	1	B9D2814	04/28/09	04/28/09	SM 2320 B-97				
Total Dissolved Solids	410	10		mg/L	1	B9D1709	04/17/09	04/17/09	SM 2540 C-97				
Total Organic Carbon	8.8	1.5	0.38	mg/L	1	B9D2816	04/28/09	04/28/09	SM 5310 C-00				



Barr Engineering Co.		Project		23/19-0B	05					
4700 W 77th St		Project	Number:	23/19-0B	05GWAS33	80		Wo	rk Order #: (902035
Minneapolis, MN 55435		Project	Manager:	Ms. Marta	a Nelson			Dat	e Reported: (06/04/09
			А		056					
		Le			Services	, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E2-209 (0902035-01) Water	Sampled: 04/13	3/09 10:55	Receive	ed: 04/15/0	9 15:25					
Chloride	1.6	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	13	1.5	0.38	mg/L	1	"	"	"	"	
MW-E2-009 (0902035-02) Water	Sampled: 04/13	3/09 12:10	Receive	ed: 04/15/0	9 15:25					
Chloride	8.8	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	33	3.0	0.76	mg/L	2	"	"	04/17/09	"	
MW-E2-305 (0902035-03) Water	Sampled: 04/13	3/09 13:55	Receive	ed: 04/15/0	9 15:25					
Chloride	22	2.0	0.22	mg/L	2	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	04/17/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	34	3.0	0.76	mg/L	2	"	"	04/17/09	"	
MW-E4-010 (0902035-04) Water	Sampled: 04/13	3/09 16:05	Receive	ed: 04/15/0	9 15:25					
Chloride	35	5.0	0.55	mg/L	5	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	04/17/09	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	21	1.5	0.38	mg/L	1	"	"	"	н	
MW-D3-007 (0902035-05) Water	Sampled: 04/1	4/09 10:40	Receive	ed: 04/15/0	9 15:25					
Chloride	20	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"		
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	27	1.5	0.38	mg/L	1	"	"	"	"	
MW-D5-308 (0902035-06) Water	Sampled: 04/1	4/09 13:10	Receive	ed: 04/15/0	9 15:25					
Chloride	11	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	28	1.5	0.38	mg/L	1	"	"	"	п	
FB-1 (0902035-07) Water Samp	led: 04/14/09 13	:35 Rec	eived: 04/	15/09 15:2	5					
Chloride	<1.0	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	<1.5	1.5	0.38	mg/L	1	"	"	"	"	

Legend Technical Services, Inc.

LEGEND Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project:23/19-0B05Project Number:23/19-0B05GWAS330Project Manager:Ms. Marta Nelson								Work Order #: 09 Date Reported: 06	
		L	A egend Te	NIONS 9 chnical S		, Inc.				
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-A3-003 (0902035-08) Water	Sampled: 04/14	4/09 15:	40 Receive	ed: 04/15/09	9 15:25					
Chloride	13	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	29	1.5	0.38	mg/L	1	"	"	"		
MW-C7-004 (0902035-09) Water	Sampled: 04/1	5/09 10:	10 Receive	ed: 04/15/09	9 15:25					
Chloride	14	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	20	1.5	0.38	mg/L	1	"	"	"	н	
MW-A6-006 (0902035-10) Water	Sampled: 04/15	5/09 11:	50 Receive	ed: 04/15/09	9 15:25					
Chloride	15	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	30	3.0	0.76	mg/L	2	"	"	04/17/09	"	
MW-C4-311 (0902035-11) Water	Sampled: 04/1	5/09 13:	55 Receive	ed: 04/15/09	9 15:25					
Chloride	2.3	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"	"	"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	21	1.5	0.38	mg/L	1	"	"		"	
M-1 (0902035-12) Water Sample	ed: 04/15/09 00:0	00 Re	ceived: 04/1	5/09 15:25						
Chloride	14	1.0	0.11	mg/L	1	B9D1707	04/17/09	04/17/09	EPA 9056(M)	
Fluoride	<0.50	0.50	0.076	mg/L	1	"	"		"	
Phosphate	<2.1	2.1	0.22	mg/L	1	"	"	"	"	
Sulfate	20	1.5	0.38	mg/L	1	"	"	"	"	



L E G E N D Technical Services, Inc.

88 Empire Drive St Paul, MN 55103 Tel: 651-642-1150 Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		•	Number:	23/19-0B(23/19-0B(: Ms. Marta	5GWAS33	0			rk Order #: 09 e Reported: 06	902035 6/04/09
				alytical R Laborato						
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-E2-209 (0902035-01) Water	Sampled: 04/13	3/09 10:55	Receiv	ved: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	0.10	0.05	0.02	mg/L	1	"	"	04/23/09	SM 4500 NO3-F-00	
MW-E2-009 (0902035-02) Water	Sampled: 04/13	3/09 12:10	Receiv	red: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	5.15	0.05	0.02	mg/L	1	"	"	04/23/09	SM 4500 NO3-F-00	
MW-E2-305 (0902035-03) Water	Sampled: 04/13	3/09 13:55	Receiv	red: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/20/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	10.9	0.05	0.02	mg/L	1	"	"	04/23/09	SM 4500 NO3-F-00	
MW-E4-010 (0902035-04) Water	Sampled: 04/13	3/09 16:05	Receiv	ved: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	16.2	0.25	0.10	mg/L	5	"	"	04/23/09	SM 4500 NO3-F-00	
MW-D3-007 (0902035-05) Water	Sampled: 04/14	4/09 10:40	Receiv	/ed: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	12.9	0.05	0.02	mg/L	1		"	04/23/09	SM 4500 NO3-F-00	
MW-D5-308 (0902035-06) Water	Sampled: 04/14	4/09 13:10	Receiv	/ed: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	4.69	0.05	0.02	mg/L	1	"	"	04/23/09	SM 4500 NO3-F-00	
FB-1 (0902035-07) Water Samp	led: 04/14/09 13	:35 Rece	eived: 04	/15/09 15:2	5					
Ammonia as N	0.20	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	<0.05	0.05	0.02	mg/L	1	"	"	04/23/09	SM 4500 NO3-F-00	
MW-A3-003 (0902035-08) Water	Sampled: 04/14	4/09 15:40	Receiv	ved: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	7.17	0.05	0.02	mg/L	1	"	n	04/27/09	SM 4500 NO3-F-00	
MW-C7-004 (0902035-09) Water	Sampled: 04/1	5/09 10:10	Receiv	/ed: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	6.70	0.05	0.02	mg/L	1	"	п	04/27/09	SM 4500 NO3-F-00	

MW-A6-006 (0902035-10) Water Sampled: 04/15/09 11:50 Received: 04/15/09 15:25

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435		,	t Number:	23/19-08 23/19-08 : Ms. Marta	05GWAS33	0				902035 6/04/09
				alytical R Laborato	esults ries, Inc.					
Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-A6-006 (0902035-10) Water	Sampled: 04/15	5/09 11:5) Receiv	ed: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	8.08	0.05	0.02	mg/L	1	"	"	04/27/09	SM 4500 NO3-F-00	
MW-C4-311 (0902035-11) Water	Sampled: 04/1	5/09 13:5	5 Receiv	ed: 04/15/0	9 15:25					
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	2.00	0.05	0.02	mg/L	1	"		04/27/09	SM 4500 NO3-F-00	
M-1 (0902035-12) Water Sample	ed: 04/15/09 00:0	00 Rece	eived: 04/1	5/09 15:25						
Ammonia as N	<0.19	0.19	0.05	mg/L	1	N/A		04/28/09	SM 4500 NH3 C-97	
Nitrate/Nitrite as N	6.05	0.05	0.02	mg/L	1	H		04/27/09	SM 4500 NO3-F-00	





Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9D2306 - EPA 200.7/3005A D	igestion										
Blank (B9D2306-BLK1)	-				Prepared	I & Analyze	ed: 04/23/0	09			
Aluminum	< 0.020	0.020	0.00017	mg/L		,					
Calcium	< 1.0	1.0	0.0077	mg/L							
Iron	< 0.050	0.050	0.0047	mg/L							
Magnesium	< 1.0	1.0	0.045	mg/L							
Manganese	< 0.020	0.020	0.00048	mg/L							
Potassium	< 1.0	1.0	0.028	mg/L							
Sodium	< 1.0	1.0	0.020	mg/L							
LCS (B9D2306-BS1)					Prepared	I & Analyze	ed: 04/23/0	09			
Aluminum	2.03	0.020	0.00017	mg/L	2.00		101	80-120			
Calcium	4.26	1.0	0.0077	mg/L	3.99		107	80-120			
Iron	2.11	0.050	0.0047	mg/L	2.00		105	80-120			
Magnesium	4.14	1.0	0.045	mg/L	3.99		104	80-120			
Manganese	0.415	0.020	0.00048	mg/L	0.399		104	80-120			
Potassium	1.85	1.0	0.028	mg/L	2.00		92.2	80-120			
Sodium	4.07	1.0	0.020	mg/L	3.99		102	80-120			
LCS Dup (B9D2306-BSD1)					Prepared	I & Analyze	ed: 04/23/0	09			
Aluminum	2.04	0.020	0.00017	mg/L	2.00		102	80-120	0.823	20	
Calcium	4.07	1.0	0.0077	mg/L	3.99		102	80-120	4.41	20	
Iron	2.11	0.050	0.0047	mg/L	2.00		106	80-120	0.200	20	
Magnesium	4.12	1.0	0.045	mg/L	3.99		103	80-120	0.508	20	
Manganese	0.416	0.020	0.00048	mg/L	0.399		104	80-120	0.140	20	
Potassium	1.84	1.0	0.028	mg/L	2.00		91.9	80-120	0.352	20	
Sodium	4.04	1.0	0.020	mg/L	3.99		101	80-120	0.707	20	
Matrix Spike (B9D2306-MS1)	S	ource:	0902035-0	1	Prepared	l & Analyze	ed: 04/23/0	09			
Aluminum	2.02	0.020	0.00017	mg/L	2.00	<0.020	101	75-125			
Calcium	62.7	1.0	0.0077	mg/L	3.99	57.5	129	75-125			M3
Iron	3.05	0.050	0.0047	mg/L	2.00	0.911	107	75-125			
Magnesium	24.8	1.0	0.045	mg/L	3.99	20.3	113	75-125			
Manganese	0.579	0.020	0.00048	mg/L	0.399	0.160	105	75-125			
Potassium	3.57	1.0	0.028	mg/L	2.00	1.44	107	75-125			
Sodium	37.3	1.0	0.020	mg/L	3.99	32.0	132	75-125			M3
Matrix Spike Dup (B9D2306-MSD1)	S	ource:	0902035-0	1	Prepared	l & Analyze	ed: 04/23/0	09			
Aluminum	2.04	0.020	0.00017	mg/L	2.00	<0.020	102	75-125	0.697	20	
Calcium	62.3	1.0	0.0077	mg/L	3.99	57.5	119	75-125	0.667	20	
Iron	3.07	0.050	0.0047	mg/L	2.00	0.911	108	75-125	0.645	20	
Magnesium	24.7	1.0	0.045	mg/L	3.99	20.3	109	75-125	0.558	20	
Manganese	0.581	0.020	0.00048	mg/L	0.399	0.160	105	75-125	0.257	20	
Potassium	3.58	1.0	0.028	mg/L	2.00	1.44	107	75-125	0.128	20	

Legend Technical Services, Inc.



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

DISSOLVED METALS ANALYSIS - Quality Control Legend Technical Services, Inc.

Analyte Batch B9D2306 - EPA 200 7/3005A Di	Spike Source %REC %RPD Analyte Result RL MDL Units Level Result %REC Limits %RPD Limit Notes Batch B9D2306 - EPA 200.7/3005A Digestion Kesult Kes										
Matrix Spike Dup (B9D2306-MSD1) Sodium	0	ource: (1.0)902035-0 0.020	1 mg/L	Prepared 3.99	I & Analyze 32.0	ed: 04/23/0 125)9 75-125	0.733	20	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

WET CHEMISTRY - Quality Control Legend Technical Services, Inc.

					o "	~					
Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9D1709 - General Prep											
Blank (B9D1709-BLK1)					Prepared	l & Analyze	ed: 04/17/	′09			
Total Dissolved Solids	< 10	10		mg/L							
Duplicate (B9D1709-DUP1)	S	ource:	0902035-0)1	Prepared	1 & Analyze	ed: 04/17	′09			
Total Dissolved Solids	304	10		mg/L		283			7.16	10	
Duplicate (B9D1709-DUP2)	S	ource:	0902035- 1	1	Prepared	l & Analyze	ed: 04/17/	/09			
Total Dissolved Solids	340	10		mg/L		360			5.71	10	
Reference (B9D1709-SRM1)					Prepared	l & Analyze	ed: 04/17/	/09			
Total Dissolved Solids	23.0	10		mg/L	23.5		97.9	95.3-105.5			
Batch B9D2814 - General Prep											
Blank (B9D2814-BLK1)					Prepared	l & Analyze	ed: 04/28/	′09			
Bicarbonate as CaCO3	< 20	20		mg/L							
Duplicate (B9D2814-DUP1)	S	ource:	0902035-0)1	Prepared	l & Analyze	ed: 04/28/	/09			
Bicarbonate as CaCO3	280	20		mg/L		280			0.00	20	
Duplicate (B9D2814-DUP2)	S	ource:	0902035- 1	0	Prepared	l & Analyze	ed: 04/28/	/09			
Bicarbonate as CaCO3	256	20		mg/L		262			2.32	20	
Reference (B9D2814-SRM1)					Prepared	l & Analyze	ed: 04/28/	′09			
Bicarbonate as CaCO3	228	20		mg/L	220		104	0-200			
Batch B9D2816 - General Prep											
Blank (B9D2816-BLK1)					Prepared	l & Analyze	ed: 04/28/	′09			
Total Organic Carbon	< 1.5	1.5	0.38	mg/L							
Duplicate (B9D2816-DUP1)	S	ource:	0902035-0)1	Prepared	l & Analyze	ed: 04/28/	′09			
Total Organic Carbon	14.1	1.5	0.38	mg/L		14.0			0.925	20	
Duplicate (B9D2816-DUP2)	S	ource:	0902035- 1	1	Prepared	l & Analyze	ed: 04/28/	′09			
Total Organic Carbon	10.7	1.5	0.38	mg/L		10.7			0.00	20	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

ANIONS 9056 - Quality Control Legend Technical Services, Inc.

					Spike	Source		%REC		%RPD	
Analyte	Result	RL	MDL	Units	Level	Result	%REC	Limits	%RPD	Limit	Notes
Batch B9D1707 - General Prep Dept 4											
Blank (B9D1707-BLK1)					Prepared	& Analyze	ed: 04/17/	09			
Chloride	< 1.0	1.0	0.11	mg/L							
Fluoride	< 0.50	0.50	0.076	mg/L							
Phosphate	< 2.1	2.1	0.22	mg/L							
Sulfate	< 1.5	1.5	0.38	mg/L							
LCS (B9D1707-BS1)		Prepared & Analyzed: 04/17/09									
Chloride	5.40	1.0	0.11	mg/L	5.00		108	85-120			
Fluoride	2.80	0.50	0.076	mg/L	2.50		112	80-120			
Phosphate	5.90	2.1	0.22	mg/L	5.00		118	80-120			
Sulfate	5.20	1.5	0.38	mg/L	5.00		104	81.5-120			
LCS Dup (B9D1707-BSD1)		Prepared & Analyzed: 04/17/09									
Chloride	5.40	1.0	0.11	mg/L	5.00		108	85-120	0.00	15	
Fluoride	2.90	0.50	0.076	mg/L	2.50		116	80-120	3.51	15	
Phosphate	5.60	2.1	0.22	mg/L	5.00		112	80-120	5.22	15	
Sulfate	5.20	1.5	0.38	mg/L	5.00		104	81.5-120	0.00	20	
Matrix Spike (B9D1707-MS1)	S	ource:	0902035-0)7	Prepared & Analyzed: 04/17/09						
Chloride	5.50	1.0	0.11	mg/L	5.00	<1.0	110	80-120			
Fluoride	2.90	0.50	0.076	mg/L	2.50	<0.50	116	80-120			
Phosphate	5.80	2.1	0.22	mg/L	5.00	<2.1	116	80-120			
Sulfate	5.60	1.5	0.38	mg/L	5.00	<1.5	112	80-120			
Matrix Spike Dup (B9D1707-MSD1)	S	ource:	0902035-0)7	Prepared & Analyzed: 04/17/09						
Chloride	5.50	1.0	0.11	mg/L	5.00	<1.0	110	80-120	0.00	15	
Fluoride	2.90	0.50	0.076	mg/L	2.50	<0.50	116	80-120	0.00	15	
Phosphate	5.90	2.1	0.22	mg/L	5.00	<2.1	118	80-120	1.71	20	
Sulfate	5.60	1.5	0.38	mg/L	5.00	<1.5	112	80-120	0.00	15	



Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

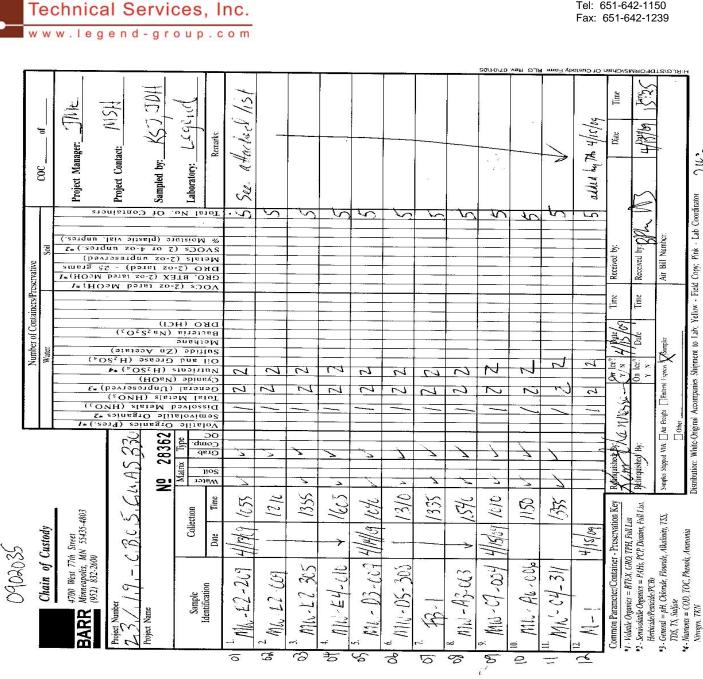
Analytical Results - Quality Control Davy Laboratories, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch N/A - No Prep											
BLK1 (0902035-BLK1)					Prepared:	Analyze	d: 04/23/0	9			
Nitrate/Nitrite as N	<0.05	0.05		mg/L		<0.05		-			
BLK2 (0902035-BLK2)					Prepared:	Analyze	d: 04/20/0	9			
Ammonia as N	<0.19	0.19		mg/L		<0.19		-			
BLK3 (0902035-BLK3)					Prepared:	Analyze	d: 04/27/0	9			
Nitrate/Nitrite as N	<0.05	0.05		mg/L		<0.05		-			
BLK4 (0902035-BLK4)					Prepared:	Analyze	d: 04/28/0	9			
Ammonia as N	<0.19	0.19		mg/L		<0.19		-			

Barr Engineering Co.	Project:	23/19-0B05		
4700 W 77th St	Project Number:	23/19-0B05GWAS330	Work Order #:	0902035
Minneapolis, MN 55435	Project Manager:	Ms. Marta Nelson	Date Reported:	06/04/09

Notes and Definitions

- M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
- H1 Sample analysis performed past holding time.
- < Less than value listed
- dry Sample results reported on a dry weight basis
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
- MS Matrix Spike = Laboratory Fortified Matrix (LFM)



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0902035

Water Sampling Details B05.03 GWAS 330			· — — — ·
Park			— — —
County, MN		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
	Method	Reporting	Comment
nalytical Parameters	Number	Limit (mg/L)	
Aluminum 🕴	EPA 6010B	0.020	
Calcium	· EPA 6010B	1.0	
Magnesium	EPA 6010B	1.0	
Iron .	EPA 6010B	0.050	
Manganese	EPA 6010B	0.020	
Sodium	EPA 6010B	1.0	
Potassium	EPA 6010B		<u> </u>
Chloride	EPA 9056 (M)	1.0	
Bicarbonate	SM 2320B (97)	20	calculation
Sulfate	EPA 9056 (M)	1.5	
Nitrate + Nitrite (as N)	SM 4500-NO3F	0.20	subcontract
Ammonia	EPA 350.1	1.0	subcontract
тос	SM 5310C	1.5	oubooni act
TDS	SM 2540 C (97)	10	
Phosphate	EPA 9056 (M)	2.1	
Fluoride	EPA 9056 (M)	0.50	
		200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200	
arameters		· · · · · · · · · · · · · · · · · · ·	
Temp		1	
Conductivity			··

P:\MpIs\23 MN\19\2319B05 UMore park environmental\WorkFiles\EIS Support\Implementation\Groundwater\Sampling Parameters

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Legend Technical Services, Inc.





FIELD SAMPLING REPORT

Date: 2/16/2009

Project: 23/19-0B05

Contact: Jim Eidem Barr Engineering Company 4700 W. 77th Street Minneapolis, MN 55435-4803

Field Sampling

Groundwater monitoring at the Umore Park site was conducted on February 9-13, 2009. 13 groundwater monitoring wells were sampled for analysis listed on EIS table.

Field Report

Attachments:

- * Field log cover sheet
- * Field log data summary
- Field log data sheets

- Meter calibration summary
- * COC's # 26779, 26781
 - Analytical parameter table

Laboratory Analysis Status

Samples were delivered to Legend Technical Services for analysis. Refer to the chain-ofcustody forms and parameter lists for exact analysis.

hannesen

Kim Johannessen Sr. Environmental Technician



FIELD LOG COVER SHEET WATER SAMPLING

Client: U	Client: Umore Park Project No: 23/19-0B05								
Technician:	Kim Johannessen	Sampling Period:	February 9-13, 2009						
Date	Temperature	Wind Speed	Wind Direction	Cloud Cover					
2/9/2009 2/10/2009 2/12/2009 10/13/2009	32-45 30-43 24-34 20-27	10-20 15-25 10-20 5-15	SE SE NW WNW	overcast/rain overcast/rain overcast overcast					

Summary of Field Activities

- * Masked duplicate M-1 was collected at MW-C7-004
- * Field blank FB-1 was collected through pump and tubing after purging MW-B1-001
- * MW-C2-202 initial pH reading was 9.40 on 2/9/09; final reading was 7.66 on 2/12/09.
- * Water elevations were measured prior to purging/stabilizing monitoring wells.

WATER LEVEL SUMMARY

Project: UMORE PARK

Project Number: 23/19-0B05

Date:

Environmental Staff: KSJ & SDI

Monitoring	Measuring	Water	Total	Static	
Location	point	level	well	water	Comments
	elevation	depth	depth	elevation	
MW-B1-001	MW-B1-001 949.29		72.0	883.94	2/13/2009
MW-C2-002	951.17	65.56	76.6	885.61	2/9/2009
MW-C2-202	951.88	66.33	145.7	885.55	2/9/2009
MW-A3-003	942.95	72.12	83.8	870.83	2/12/2009
MW-C7-004	930.32	71.41	92.0	858.91	2/13/2009
MW-E2-305	940.73	54.13	77.0	886.60	2/10/2009
MW-A6-006	935.41	83.10	114.0	852.31	2/10/2009
MW-D3-007	945.49	61.04	71.8	884.45	2/12/2009
MW-D5-308	936.86	65.25	76.8	871.61	2/13/2009
MW-E2-009	949.37	62.91	69.6	886.46	2/10/2009
MW-E2-209	948.85	62.38	127.2	886.47	2/10/2009
MW-E4-010	940.15	57.46	73.6	882.69	2/12/2009
MW-C4-311	935.96	61.39	94.3	874.57	2/12/2009
		·			
				<u> </u>	
		<u> </u>	<u> </u>	1	

FIELD DATA SUMMARY

Project: UMORE PARK

Project number: 23/19-0B05

Environmental Staff: KSJ

Monitoring location	Date	Temp (oC)	Conductivity @ 25	pH	Eh (mV)	D.O. (mg/l)
MW-C2-002	2/9/09	9.2	1205	6.94	-14	3.68
MW-E2-209	2/10/09	8.8	443	7.28	-104	0.3
MW-E2-009	tt	9.0	536	7.27	96	4.59
MW-A6-006	tt	9.9	546	7.27	54	5.87
MW-E2-305	ţţ	8.9	589	7.01	8	3.5
MW-E4-010	2/12/09	8.9	758	7.06	33	5.98
MW-D3-007	ţţ	8.7	711	7.09	89	7.75
MW-C2-202	11	7.3	647	7.66	-54	1.04
MW-A3-003	11	8.5	623	7.28	22	7.5
MW-C4-304	11	8.8	493	7.20	55	5.83
MW-C7-004	2/13/09	9.1	681	7.12	42	8.27
MW-D5-308	99	8.6	611	7.24	73	7.08
MW-B1-001	11	8.0	479	7.4	92	7.89



Client: UMORE PACK Monitoring Point: MW-CZ-202									
	Mount		Date	: 2	F 1	79 79			
$\sim \sim $	10 BO.5 GWA	\$ 330	Sam	ple Time:	DH h	119h -)	no San	uples,	
GENERAL				STABIL	IZATION	TEST	Coll	beted	
Barr lock:	<i>m</i> -								
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance Clouely	
Total well depth:*	143,5		18,6	55	9.40	-86	2.64	green	
Static water level:*	66,33		8.8Z	_57_	8,82	38	3,68	Clear	
Water depth:*	77,2	1315/ 115.4	8:37	55	8.64	Ø	1.41	Stirly	
Well volume: (gal)	/3	1325/1270	8,89	58	9.10	<u>`</u>	Ø,36	Jarly	
Purge method:	Submossible	1342/1440	9.03	52	8,04	22	Ø,85	Clear	
Sample method:	H								
Start time:	1140	1140 odor: none detected							
Stop time:	1340	Purge App	Purge Appearance: beg in - Cloudy greentsh end-						
Duration: (minutes)	120.	Sample Ap	pearance:	clear	/	· · · · · · · · · · · · · · · · · · ·		Clear	
Rate, gpm:	1.2 e/m	Comments	: C 129	50 /ou	rered p	nnp	$\mathcal{P} = \int_{\mathcal{P}} \mathcal{P}$	from teal pump	
Volume, purged:	= 200 lite	well !	pottom	7 Sug	e per	impo	Kê S'Tav	rea pang	
Duplicate collected?	no	1 102 / 5 /	U.	You ra			@ 1:	330.	
Sample collection by:	KSJ, SDI	CO2-	·	n2-	Fe(Fe2		
Others present:			· ·						
WELL INSPECTION (ans	wer for each category	, state if lock re	eplaced, deta	il any repairs	needed on	back of form	n)		
CASING & CAP:	COI	LAR:		LOCK:	·	<u> </u>	OTHE	२:	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	ıtile- ger	neral-	nutrient-	cyan	ide-	DRO-	Sulfid	e	
oil,grease- bacte	eria-tota	al metal-	filtere	d metal-	me	ethane-	fi	iter-	
Others:									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: U More Park Monitoring Point: MW-CZ-002									
	mount	· · · · · ·	Date	*: Z	1910	9			
	- 0B05 6WI	45 330	San	ple Time:	<u> </u>	10			
GENERAL	DATA			STABIL	IZATION	TEST			
Barr lock:	NO-								
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance	
Total well depth:*	76.6	65,727 1425/3g.	8,96	55	·7,72	-52	Ø.51	Cloudy	
Static water level:*	65.56	1435/81	1-61/						
Water depth:*	11	1445/13g	1495/13, 9,38 48 6.95 -11 304 Clear						
Well volume: (gal)	1.8	1455/18.	9.27	<u>47</u>	6,95	-13	3.47	/1	
Purge method:	Submersible	1505 230	9.23	47	6,94	-14	3.68	ΪX	
Sample method:	и	1205							
Start time:	1420 Odor: none detacted								
Stop time:	1505	Purge Appe	Purge Appearance: Dagin - clously brown, silty /end-clear						
Duration: (minutes)	45.	Sample Ap		clean			/		
Rate, gpm:	,5	Comments	Cono	luctur	ty read	dings	Sug	piet- ate,	
Volume, purged:	ZZgal	Final	read	ling t	aken	is a	Cour	ate.	
Duplicate collected?	20		•				·	- - -	
Sample collection by:	KSJ, SDI	CO2-	N	in2-	Fe(Г)-	Fe2-	•	
Others present:			•						
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on l	back of form)		
CASING & CAP:	COL	LAR:		LOCK:	·		OTHER	₹:	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	· · · · · · · · · · · · · · · · · · ·	eral-	nutrient-	+ 1 cyan	ide-	DRO-	Sulfide	}-	
oil,grease- bacte		I metal-	filtere	i metal-	me	thane-	fil	ter-	
Others: Snap pack-1									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE PARK Monitoring Point: MW-EZ-209								
	Semount	<u></u>	Date	»: 2	1 _ 1	7		
Project #: 23/	19-0B05 GI	JAS 330	San	ple Time:	127	20		
GENERAL				STABIL	IZATION	TEST		
	20-00							
Barr lock:	No	Time/	Temp.	Cond.				Turbidity
Casing diameter:	Z"	Volume	°C	@ 25	pH	Eh	D.O.	Appearance
Total well depth:*	127.21	1135/25-	8,85	444	7.45	-103	1,65	Clouly
Static water level:*	62,38	114/5/305.	8.88	443	7,30	- 89	0,79	clearing
Water depth:*	64.8	1200/459	8.84	444	4.28	-101	9.19	clear
Well volume: (gal)		1210/559,	8,83	443	7.28	-/04	Ø,30	11
Purge method:	Submersible	/						
Sample method:	. 11			. 7	ļ <u></u>			
Start time:	1115		one de		/ ,			
Stop time:	1210	Purge Appe	earance:	egin - C	louchy	brown	lend-	dea
Duration: (minutes)	55	Sample Ap			/			
Rate, gpm:	1	Comments	:		•			
Volume, purged:	55gal							
Duplicate collected?	710		-					· ·
Sample collection by:	KSJ, SDI	CO2-	M	n2-	Fe(Г)-	Fe2-	
Others present:								
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on I	back of form)	
CASING & CAP:		LAR:	•	LOCK:			OTHER) -
······································	MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:							
VOC- semi-vola	· · · · · · · · · · · · · · · · · · ·	eral- /	nutrient- /	+ (cyani	ide-	DRO-	Sulfide)-
oil,grease- bacte	eria- tota	I metal-	filtered	i metal-	me	thane-	fil	ier- /
Others: SNap								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE PALK Monitoring Point: MW-EZ-009									
~~~~	emount		Dat	e: 7	2/10/1	59			
Project #: 23/1	9-0BOSGW	AS 332	) San	ple Time:		240			
GENERAL	DATA			STABIL	IZATION	TÉST	r1		
Barr lock:	no								
Casing diameter:	2 ⁱⁱ	Time/ Volume	Temp. ∥ ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance	
Total well depth:*	69.6	107/39	8.30	690	7,52	14	3,50	cloudy	
Static water level:*	62.91	1/27/19	8,59	649	7.40	39	3.55	Cleaning	
Water depth:*	6.7	1137/ 151	8184	609	7,29	93	4,12	Clear	
Well volume: (gal)	1	1197/212	.8,97	571	7,25	.97	4,34		
Purge method:	Submersible	1217/276	8,98	551	7.24	99	4,81	<i></i>	
Sample method:	<u> </u>	1237/ 331	9,02	536	7.27	94	4.59	и	
Start time:	1047								
Stop time:	1237	Purge Appe	earance: /	Rayin - S	lightly	<u>cloudy</u>	lend-	lear	
Duration: (minutes)	110	Sample Ap		~,	×	/			
Rate, gran 1/m	,3 C/m	Comments:							
Volume, purged:	33 liters			~					
Duplicate collected?	<u>no</u>		•						
Sample collection by:	KSJ, SDI	CO2-	N	In2	Fe(	Г)-	Fe2-		
Others present:	· · ·		• •						
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on l	back of form	)		
CASING & CAP:	COL	LAR:		LOCK:		<u></u>	OTHER		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	tile- gen	eral-	nutrient-	+   cyan	ide-	DRO-	Sulfide	<u>}-</u>	
oil,grease- bacte	eria- tota	I metal-	filtere	d metal-	me	thane-	fil	ter- /	
Others: SNew Pack - 1									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE PARK Monitoring Point: MW-A6-806									
Client: UMOR	4					<u>141-4</u>	6-004		
Location: ROS	mount		Date		2/10/0	7			
Project #: 23/19	7-0B05 Gul	<u>AS 330</u>	Sam	ple Time:		45			
GENERAL	DATA			STABIL	IZATION	TEST			
Barr lock:	YES								
Casing diameter:	2"	Time/ Volume	Temp. ⁰C	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance	
Total well depth:*	114.0	83,20 1345/10g	9,27	544	7,48	48	4.10	Cloudy	
Static water level:*	83,10	1355/203	9,49	545	7,30	53	4,35		
Water depth:*	30,9	1405/30, 9163 547 7.30 52 5.21 "							
Well volume: (gal)	5	1425/ \$63 91.83 545 7.29 52 5.67 Clear							
Purge method:	Submersible	14/40/65	9.87	546	7.27	54	5,87	11	
Sample method:	<i>I</i> I								
Start time: 1335 Odor: none detected									
Stop time:	1440	Purge Appe	earance: {	Degin - C	londy	proun,	silty	lend-cleer	
Duration: (minutes)	65.	Sample Ap	pearance:	Clear	/				
Rate, gpm:	1	Comments			:				
Volume, purged:	65gal			·	•				
Duplicate collected?	no								
Sample collection by:	KSJ,SDI	CO2-	M	n2-	Fe(	Г)-	Fe2-	•	
Others present:			·		<u></u>		<u> </u>		
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on I	back of form	1)		
CASING & CAP:	COL	LAR:		LOCK:			OTHER	<u>रः</u>	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-volatile- general- nutrient- 17 (cyanide- DRO- Sulfide-									
oil,grease- bacte	eria- tota	I metal-	filtered	i metal- 🏼 🏻 🖊	me	thane-	fil	ter- 1	
Others: Shop parek-1									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: 1/ MO	RE PARK	<u></u>	Mor	itoring Po	oint: 🎤	MW-E	72-3	305		
Location: ROS	mount		Date	»: 2	1. 1	59				
Project #: 23		UAS 330	) San	ple Time:	17	20				
GENERAL	•			STABIL	IZATION	TEST				
Barr lock:	'nо					<b>、</b>				
Casing diameter:	2"	Time/ Volume	Temp. ⁰C	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance		
Total well depth:*	77.0	1605/49	8:70	456	7,91	-250	Ø,65	cloudy		
Static water level:*	54.13	1615/ 7g	8,86	489	7.52	- 48	1,12	<i>t)</i>		
Water depth:*	22,9	1630/10g								
Well volume: (gal)	3.7	1645/149	8,83	609	7,24	. 5	3,12	<i>i</i> .		
Purge method:	Submersible.	ible 1700/18, 8,85 601 7.12 13 3.29 "								
Sample method:	<u>.</u> !!	" 1715/22g 8:88 589 7.01 8 3.50 "								
Start time:	1350	1350 Odor: none detected								
Stop time:	1715	Purge Appe	earance: A	2gin - ma	d close	ly/l	<u>nd-C</u>	lear		
Duration: (minutes)	85 .	Sample Ap	pearance:	Clear	· ``	/				
Rate, gpm:	. 25	Comments:	;		;	:				
Volume, purged:	27 gal									
Duplicate collected?	10		•							
Sample collection by:	KSJ	C02-	M	n2-	Fe(1	<u>[]-</u>	Fe2-			
Others present:										
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	I any repairs	needed on b	back of form)	<b>)</b>			
CASING & CAP: COLLAR: LOCK: OTHER:										
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:										
VOC- semi-vola	tile- gen	eral-	nutrient-	+1 cyani	de-	DRO-	Sulfide	•••		
oil,grease- bacte	ria- tota	I metal-	filterec	I metal-	me	thane-	filt	er-		
Others: Shap Cup - 1										

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE	Client: UMORE PARK Monitoring Point: MW-E4-010								
	mount		Date	»: Z		29			
	-0BOS		Sam	ple Time:	103	30			
GENERAL	DATA			STABIL	IZATION	TEST			
Barr lock:	no		- - - -						
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance	
Total well depth:*	73,6	58.1 0925/4g	8.65	622	7.28	-68	3.35	Cloudy	
Static water level:*	57.46	0940 / 8;	8,69	682	7.20	- 31	4,28	Clearing	
Water depth:*	16.1	0950 / 10g.							
Well volume: (gal)	2.6	1000 / 12g.							
Purge method:	Submersible	1010/14g.	8.84	749	7,05	25	5,78	` <i>le</i>	
Sample method:		1020/16,	8. 87	758	7.06	33	5.98	t7	
Start time:	0910	Odor: 7	one a	letecte			/		
Stop time:	1020	Purge Appe	earance: 3	/		rdy bri	non les	nd- clear	
Duration: (minutes)	70.	Sample App	pearance:	dea	<u> </u>				
Rate, gpm:	. 25	Comments:							
Volume, purged:	1 legal				•				
Duplicate collected?	no	- -	-						
Sample collection by:	KSJ, SDI	CO2-	M	n2-	Fe(	<u>[]-</u>	Fe2-		
Others present:			• • -						
WELL INSPECTION (ans	wer for each category,	state if lock rep	olaced, deta	il any repairs	needed on t	back of form	)		
CASING & CAP: COLLAR: LOCK: OTHER:									
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	tile- gen	eral-	nutrient-	+   cyani	de-	DRO-	Sulfide	)	
oil,grease- bacte	eria- tota	l metal-	filtered	I metal-	me	thane-	fill	er-	
Others: Snup Cup - 1									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORI	= PARK	······································	Mor	itoring Po	oint:	MW-	13-0	7 00
0	Semount		Date	»: ž	2/12	109		
Project #: 23/1	9-0 BOJGH	145 330	San	ple Time:	17	-50		
GENERAL	DATA		•	STABIL	IZATION	TEST	1	
Barr lock:	no-u							
Casing diameter:	2"	Time/ Volume	Temp. ºC	Cond. @ 25	pН	Eh	. D.O.	Turbidity Appearance SIL9 ^{httu}
Total well depth:*	71.8	61,30	8,92	680	7,38	31	6.12	c londy
Static water level:*	61.04	12t0/6g.	8,85	668	7,30	39	6.87	clearing
Water depth:*	10,8	1210/99	8.79	<u>695</u>	7,25	47	7,29	Clear
Well volume: (gal)	1,8	1220/11g	8,71	703	7,18	70	7.26	(1
Purge method:	Submarsible	1230/139	8.73	708	7.14	80	7.	<i>4</i>
Sample method:	<u> </u>	1240/159	8,72	711	7,09	89	2.75	11
Start time:	//35							
Stop time:	1240	Purge Appe	earance: /	legin-n	red clo	uely bl	own/en	d- deer
Duration: (minutes)	65.	Sample App	pearance:	Clear				
Rate, gpm:	.25	Comments:						
Volume, purged:	15gal			· .				
Duplicate collected?	No							
Sample collection by:	KSJ, SDI	CO2-	M	n2-	Fe(1	ſ)-	Fe2-	
Others present:		· · · · ·	· 				·····	
WELL INSPECTION (ans	wer for each category,	state if lock rep	olaced, deta	il any repairs	needed on t	back of form	)	
CASING & CAP: COLLAR: LOCK: OTHER:								
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-vola	tile- gen	eral-	nutrient- /	+ ( cyani	de-	DRO-	Sulfide	-
oil,grease- bacte	ria- tota	I metal-	filtered	I metal-	me	thane-	filt	er- [
Others: Snap Cup - 1								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



lient: amore	prak		1	Monitoring	Point:	MWC	2-20;	2
ocation:			ľ	Date:	2-12-			
Project #: 2.3 /	10805	· .		Sample Ti	me: /	315		•
GENERAL D	ATA			STA	BILIZATIC	NTEST		
ari lock:	N				,			Turbidity
Casing diameter:	2	Time/ Volume	Temp.ºC	Cond. @ 25	pН	Eh .	D.O.	Appearance
"otal well depth:"	145.7	START	8,47	632	8.89	-2095	3,27	cronor
Static water level:*	66.36	1041	7,82	654	8,40	-137,8	.75	
Water depth:*	79.4	1107	7,53	656	8.ID	-45.0	.82	
Well volume: (gal)	13	1133	7.57	451	7.79	-49.7	1.04	
Purge method:	1.5 mb.	1159	7.42	649	7.72	-61.9	1,00	
Sample method:	GRAB	1225	7.31	647	7.66	- 54.3	1.04	
Start time:	1015	Odor: N	4	•				
Stop time:	1315	Purge Appe	arance:	CLOUDY	<u>`</u>	LEAN		
Duration (minutes):	180	Sample App	bearance:	CLBAR				
Rate, gpm:	.5	Comments:	7.29	640	7.61	- 50.0	1.01	1.09
Volume, purged:	90 gol							
Duplicate collected?						•		. •
Sample collection by:	SD1,KS	1002-		Mn2-		Fe(T)-		Fe2-
Others present:					- 10, F	•	•	•
WELL INSPECT	ON (answer e	each category,	, state if look r	eplaced, deta	ill any repair	s needed on t	back of form, i	and notify projec
manager of any defi CASING & CAP:	Aleriales‡	COLLAR:			LOCK:		PLÜ	3:
FLOOD PROTECTIC	DN:	MDH WEL	L TAG:	,	OTHER:			
WW.groundwater me		WS: wate	er supply well	SW: su	inface water,	SE: sed	iment o	her:
	-volatile-	general-	2 nutrier	nt- 2 ci	yanide-	DRO-	Sulfide	<b>}</b> ∙
1				ered metal-		hane-	filter-	

*Measurements are referenced from top of riser pipe, unless otherwise indicated



Client: Uma	re Park	<u> </u>	Mor	nitoring Po	oint: M	W-A.	3-00	3	
<b>/</b>	Semount		Date	e: 7	1 1	>9			
Project #: 23/	19-0B05G	WAS 330	j San	ple Time:	1	520			
GENERAL	DATA			STABIL		TEST	·		
Barr lock:	no-u.								
Casing diameter:	2"	Time/ Volume	Temp. ⁰C	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance Slig Willy	
Total well depth:*	83,8	7727/4	8,36	620	7,69	96	8.18	Monday	
Static water level:*	72.12	14/12/83	8,40	623	7.4F	45	7.69	dear	
Water depth:*	11.7	1452/109	8151	624	7.33	11	7161	<u>lı</u>	
Well volume: (gal)	1,9	1502/1208145 623 7,30 18 7.52 11							
Purge method:	Submersible	1512/14 8.53 623 7.28 22 7.50 h							
Sample method:	И			L					
Start time:	14/12			<u>det ec</u>			. /		
Stop time:	1512	Purge Appe	earance: <i>L</i>	begin-c	toucky &	VTUN, S	illy p	m Ckar	
Duration: (minutes)	60	Sample Ap	pearance:	clear	`			. <u></u>	
Rate, gpm:	, 75	Comments	- 		÷				
Volume, purged:	14gal	-		• •					
Duplicate collected?	no	- -		۰ .					
Sample collection by:	KSJ, SDI	CO2-	N	in2-	Fe(	Г)-	Fe2-	<b>.</b>	
Others present:			· ·						
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on I	back of form	1)		
CASING & CAP:	COL	LAR:		LOCK:			OTHEF	<u> </u>	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	ntile- gen	eral- /	nutrient-	$\frac{1+1}{-}$ cyan	ide-	DRO-	Sulfid	<del>9-</del>	
oil,grease- bacte	eria- tota	I metal-	filtere	d metal-	/ me	thane-	fil	iter-	
Others: Snap Cup-1									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: Uman	lient: Umore Park Monitoring Point: MW-CH-304(311)								
· · · ·	semount	·	Date	»: 2	2/12/	09			
Project #: 23/1	9-0B05 G1	JAS 330	Sam	ple Time:	17	30			
GENERAL	DATA			STABIL	IZATION	TEST			
Barr lock:	no - U.								
Casing diameter:	24	Time/ Volume	Temp. ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance	
Total well depth:*	943	63.5 1632/4g	8,69	541	7.54	-132	2,06	Clear	
Static water level:*	61.39	1647 /89	8.74	524	7.39	- 59	3.95	<i>L</i> i	
Water depth:*	32,9	1657/105	8.78	509	7.28	- 4	4.87	11	
Well volume: (gal)	5,4	1701/129	8.79	497	1.22	30	5.35	ii ii	
Purge method:	Submersible	1717/14	8.8]	493	7.20	55	5,83		
Sample method:	11								
Start time:	1617	1617 Odor: None detected 1717 Purge Appearance: begin - slightly cloudy/und-clea							
Stop time:	1717	Purge Appe	earance: b	<u>egin -</u>	slight	by ch	mdy/	ind-Clea	
Duration: (minutes)	60.	Sample App	pearance:	clea	<u> </u>				
Rate, gpm:	,25	Comments:			, ,				
Volume, purged:	14 gal	-							
Duplicate collected?	no		•	•					
Sample collection by:	KSJ, SDI	CO2-	M	n2-	Fe(	Г)-	Fe2-	•	
Others present:			• •		·····				
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on l	back of form	)		
CASING & CAP:	COL	LAR:		LOCK:			OTHEF	<u>}:</u>	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-vola	tile- gen	eral-2	nutrient-	1+1 cyani	ide-	DRO-	Sulfide	<u>}-</u>	
oil,grease- bacte	eria-tota	I metal-	filtered	i metal-	/ me	thane-	ព្រ	ter-	
Others:									

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: U more	Park	· · ·	Mor	itoring Po	oint: M	M.W-C	7-00	24
	emount	·	Date	»: 2	i	09		
· · · /	9-0B05 GW	AS 330	San	ple Time:	105	70		
GENERAL				STABI	IZATION	TEST		
Barr lock:	NO-U			•				
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance SUSW4
Total well depth:*	920	71.79 0938/45-	9.00	677	7.39	-61	6.43	cloudy
Static water level:*	71.41	0953/89	8.89	687	7.30	- 24	6,95	11
Water depth:*	20.6	1003/103.	8,80	683	7,23	4	7.38	<u> </u>
Well volume: (gal)	3,4	1013/12g	8.87	682	7.18	.20	7.98	i(
Purge method:	Submersible	1023/14g	9.03	680	7.14	33	8.15	Clear
Sample method:	i(	1033/169	9,09	681	7.12	42	8.2.7	и
Start time:	0923		10Ne (	later	- <u>.</u> .		7 4	
Stop time:	1033	Purge Appe	earance: $ ot\!\!\!/$	regin-me	dcloud	y brown	and-	Clear
Duration: (minutes)	70.	Sample Ap	pearance:	Clear				
Rate, gpm:	,25	Comments	<u>:</u>					
Volume, purged:	16 gal	-			•			
Duplicate collected?	M-1	-						
Sample collection by:	KSJ, SDI	CO2-	N	in2-	Fe(	Г)-	Fe2-	• •••••••
Others present:						·······-		
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on I	back of form	)	
CASING & CAP:	COL	LAR:		LOCK:			OTHEF	<u>≀:</u>
MW: groundwater monito	ring well WS: wate	er supply well	SW: su	Irface water	SE: sed	iment c	other:	
VOC- semi-vola	itile- gen	eral- 4	nutrient-	4 cyan	ide-	DRO-	Sulfide	<b>}-</b>
oil,grease- bacte	eria- tota	I metal-	filtere	d metal-	7 <u>me</u>	thane-	fil	ter-
Others:			······					·····

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



· · · · · · · · · · · · · · · · · · ·		·····		<u> </u>	•			
Client: Umi	4	·		itoring Po		<u>MW-</u>	15-	308
Location: Kos	emount-		Date		2/13/	09		
Project #: 23//	9-0BOSEW	<u> 15330</u>	San	ple Time:	(	245		
GENERAL	DATA			STABIL	IZATION	TEST		
Barr lock:	no-U						· ·	
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance
Total well depth:*	76.8	67.9 1203/49	8,50	634	7.50	94	6,53	cloudy
Static water level:*	65,25	1218/89	8152	621	7,39	56	7,10	Clear
Water depth:*	11,6	1228/109	8146	615	7.28	68	7.01	ų
Well volume: (gal)	1,9	1238/129	8:64	611	7,24	.73	7.08	11
Purge method:	Submersible		· · · · · · · · · · · · · · · · · · ·					
Sample method:	. <i>h</i>		L	I	1			
Start time:	1148	Odor: 7	cone c	letecto	d	·		
Stop time:	1238	Purge Appe Sample Ap	earance: Z	Segin-1	wed clo	ruly bi	own k	end.
Duration: (minutes)	50.	Sample Ap	pearance:	<u>sligh</u> d	thy do	richy-	clea	<u> </u>
Rate, gpm:	,25	Comments	:		, ,	``		
Volume, purged:	12 gal			·	•			
Duplicate collected?	20							·
Sample collection by:	KSJ, SDI	CO2-	M	n2-	Fe(1	[ <b>)-</b>	Fe2-	
Others present:	· · · · · · · · · · · · · · · · · · ·	· · · · ·						
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on t	back of form	)	
CASING & CAP:	COL	LAR:		LOCK:			OTHER	) <del>.</del> \
MW: groundwater monito	ring well WS: wate	er supply well	SW: su	rface water	SE: sedi	ment c	other:	
VOC- semi-vola	tile- gen	eral-2	nutrient-	2 cyani	ide	DRO-	Sulfide	<del>)-</del>
oil,grease- bacte	eria- tota	l metal-	filtered	i metal- /	me	thane-	fill	ter-
Others:	·							

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: // mm	re Park		Mon	itoring Po	int: V	NW-T-	31- CE	>/
	em.cunt		Date	e: 2	-/13/0	<u>  9</u>		
Project #: 23/	19-0BOSE	WAS 330	Sam	ple Time:	15	10		
GENERAL	DATA			STABIL	IZATION	TEST		
Barr lock:	no-U		-					
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance
Total well depth:*	72.0	66.41 1353/4g	7,57	455	8.04	37	4.95	Clear
Static water level:*	45.35	1408/85	7.89	467	7.83	71	6,01	и
Water depth:*	6.7	14/23/129	,8.07	475	7.59	76	6.89	Ч
Well volume: (gal)	1	1438/143	7.99	478	7.41	.84	7,38	И
Purge method:	Submersible	1453/20	7.95	479	7.35	92	7,89	ų
Sample method:	ĸ							
Start time:	/338			tect		1	/	
Stop time:	1453	Purge Appe	earance: t	egin -	med d	ondy b	rown/e	nd-dear
Duration: (minutes)	75.	Sample Ap	pearance:	Clear	~ z			
Rate, gpm:	,25	Comments:	:		:			
Volume, purged:	20 gal	-			•			
Duplicate collected?	FB-1	· ·	•	• •				
Sample collection by:	KSJ,SDI	CO2-	M	n2-	Fe(T	<u>-)-</u>	Fe2-	
Others present:								
WELL INSPECTION (ans	wer for each category,	state if lock re	placed, deta	il any repairs	needed on b	ack of form	)	
CASING & CAP:	COL	LAR:		LOCK:			OTHER	l:
MW: groundwater monito	ring well WS: wate	er supply well	SW: su	rface water	SE: sedi	ment c	other:	
VOC- semi-vola	tile- gen	eral-	nutrient-	cyani	ide-	DRO-	Sulfide	
oil,grease- bacte	eria-tota	I metal-	filtered	I metal-	me	thane-	fill	er-
Others:						<u></u>		

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR ENGINEERING COMPANY METER CALIBRATION SUMMARY

PROJECT UMON	RE PARK
TECHNICIAN K	ST SDI

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WEATLED CONDITIONS

WEATHER CONDIT	· Wind	Wind	Temperature	Cloud	Comments
Date	Direction	Speed	F.	Cover	1
2/9/09	SE	10-20		overcast	/ram.
2/10/09	SE :	15-25	30-43	overcast	Jrain
2/12/09	NW	10-20	24-34	werast	<u> </u>
2/13/09	WNW	5-15	20-27	mercast.	
12		<u> </u>	<u> </u>		
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Meter type	Date	Time	Temperature	Standard	pH Meter	Cond. Cell	ORP
and number			.c.	Solution	Reading	Result	Reading
	2/9/09	1020	11	7/10		1000 andes	249 m
YSI 556	2.110109	0850	15.	7-110	Construction of the local division of the lo	1000 anhos	244
M	2/12/09	0840	10	7/10	7,00/10,00	1000 1.44103	251 m
5D YSI 532		0915	15	7/10	7.00/10:00	1000 und	
	7/12/09	0855	12	7/10	7.00 10.00	1000 Learning	1. 748
YSI 556	-41201				<u> </u>		
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		l			i	<u> </u>	
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231+,- 10mV @ 250						<u></u>	<u>L</u>

								umber	Number of Containers/Preservative	iners/P1	eservati	vc				ſ	
Chain of Custody	ustody							Water				Soil				01	
<b>BARR</b> Minneapolis, MN 55435-4803 (952) 832-2600	Street N 55435-48	03			7* 7* (*50	·		(*0			<b>I</b> *(НОэМ	25 grams 17ed) 2*(.səiq)	l, unpres.)	1618	Project Manager:	lager: <u>JIM</u> E	Ei dens
5 - - - -	0,B,0,5,6,W,AS	5.64	N S	330		112 (HVO (HNO (HVO)	≠* (*OS	2 <u>5</u> H) 98 (916190)	( ^ɛ O²S			asərqau		TistnoO	Project Contact:		- 10
Project Name		E. Latiture		6,63)	Organ	) sieis	r (H2 LOBN)	ΨuZ)	s 6V)		-z) xh	zo-7)		10 .c	Sampled by:		V
Sample	Collection	lion	ii Matrix	ab. Iyp	olatile mivola	M let	abins) atrient:		ктетія RO (Н		TA ,OA	) slais		DN ISIO	Laboratory:	Leganc	K
02	2/9/m	Time	os M		<u>۸</u>	οT		٩Ś	°व		9	W		T V	Attache	Remarks:	
1	2/10/09		<u>,</u> ,	5										IU		Longe	
3. MW- E2 - 609		1240	7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			N		······································		· · · · · · · · · · · · · · · · · · ·			5		W ¹ 2DW462MaAujat	
4 MW- A6-006	d Michael Subjection	1445	den -	5		<u> </u>	N							5	ħ	-01289904-24999 Hor	
5. Mul- E2 - 305		122	2			-	N							h		musado	
6.		in the second seco													-		
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10.																	
11.									· · · · · · · · · · · · · · · · · · ·			· ·					
12.																	
Common Parameter/Container - Preservation Key	- Preservati	on Key	Rehnquished By	shed By	6 10 10	1 Sel		Ice?	Date	Time		Received	py:			Date	Time
C [*] I - Volatile Organics = B1EX, GKC C [*] 2 - Semivolatile Organics = PAHs, I H - HoshiridoIDesciridoIDCR:	, IPH, Full Li PCP, Dioxins, F		Beling	Relinquished By:			u N N	Ice? *	Dáte	Time		Received by:	77: KM	Man	R.	2//i//of	1 Jime (
0. General – pH, Chloride, Flouride, Alkalinity, TSS, CS3 - General – pH, Chloride, Flouride, Alkalinity, TSS, CD3, TS, Sulfate	le, Alkalinity, T		Samples Sh	Samples Shipped VIA: Air Freight			Federal Express	s Sampler	pler	-	Air	Bill	Number.		N		
S*4 · Nutrients = COD, TOC, Phenok Nitrogen, TKN	s, Ammonia	JA	istributic	Distribution: White-Original	Original	Accomp	anies Sh	pment t	Accompanies Shipment to Lab; Yellow		- Field Copy; Pink	opy; Pir	ık - Lat	- Lab Coordinator	inator	5.9"	

New Street in the second second

H:RLG/STDFORMS/Chain Of Custody Form RLG

Record by:     Record by:     Record by:     Record by:     Record by:       Record by:     Record by:     Record by:     Record by:     Record by:       Record by:     Record by:     Record by:     Record by:				Number of Containers/Preservative Water	iers/Prese	rvative Soi				of
Balance (In Second Matrix     All and All an	4700 West 77th Street Minneapolis, MN 55435-4803 (952) 832-2600	Z*		(*(	<i>I</i> *(HO	(pən Ş Eləmə	(səidun		ager:	I'm Eidon
Second br:     Second br:     Second br:     Second br:       Second br:     Second br:     Second br:     Second br:       Second br:     Second br:     Second br:       Second br:     Second br:     Second br:	6 WHS	es (Pre ganics	(pəvrəsc	(state)	əM bə:	npreser ed) - 2	Isiv Sits		act:	N L
Matrix         Model         Model         Model         Model         Model         Matrix         Model         Model         Model         Model		Organi 10 olij	отдаU) (НовИ)	oA ⁿ S ₂ вN)		161 ZO-2	ध्य (bjs:		KS	freed
V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V     V <td>Collection</td> <td>np. Po Batile slovim</td> <td>neral ) abine</td> <td>lfide ( cteria cteria</td> <td>z) \$30</td> <td>20 (2- (2-</td> <td>utsioM</td> <td></td> <td>Lege</td> <td>2</td>	Collection	np. Po Batile slovim	neral ) abine	lfide ( cteria cteria	z) \$30	20 (2- (2-	utsioM		Lege	2
0     V     V     1     2     2     1     5     5       0     V     V     1     2     2     1     5     5       0     V     V     1     2     2     1     5       0     V     V     1     2     2     5       0     V     V     1     2     2       0     V     V     1     2     2       0     V     V     1     2     2       0     V     V     1     2     2       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     7     5       1 <td>IPM</td> <td>2¢1 A0 C0</td> <td>Cys Ge</td> <td>Sul Ba Ba</td> <td>ΔΛ</td> <td>DF DF</td> <td>%</td> <td>07</td> <td>Remarks:</td> <td></td>	IPM	2¢1 A0 C0	Cys Ge	Sul Ba Ba	ΔΛ	DF DF	%	07	Remarks:	
0     V     V     1     2     2       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     2     2     5       0     V     1     1     2     5       0     V     1     1     2     1       1     1     1     2     1     5       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     1       1     1     1 <td>1030</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>~~~</td> <td>` م</td> <td>Hacks</td> <td>Contraction of the second</td>	1030						~~~	` م	Hacks	Contraction of the second
7     V     1     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     2     5       0     V     V     1     2     5       0     V     V     1     2     5       1     1     2     1     5       2     1     1     2     5       0     V     1     1     5       1     1     2     1     5       1     1     1     1     5       1     1     1     1     5       1     1     1     1     5       1     1     1     1     1       1     1     1     1     1       1     1     1     1 <td></td> <td><u>(145)</u></td> <td></td> <td></td> <td>· .</td> <td></td> <td></td> <td></td> <td></td> <td></td>		<u>(145)</u>			· .					
0     U     U     1     2     2       0     U     U     1     2     2       5     U     U     1     2     2       6     U     U     1     2     2       6     U     U     1     2     2       6     U     U     1     2     2       7     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     1     1     2     1       1     1     1     1     1     5       1     1     1     1     1     1       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1 <td>1</td> <td>00140776</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td><u>aler</u>mannia</td> <td></td>	1	00140776					X		<u>aler</u> mannia	
0     U     U     1     2     2       0     U     U     1     2     2       5     U     U     1     2     2       6     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     U     1     2     2       0     U     1     1     2     2       1     1     1     2     2     1       1     1     1     2     2     1       0     1     1     2     1     1       1     1     1     1     2     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</td> <td></td> <td>thataning a second s</td> <td></td>							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		thataning a second s	
0     1     1     2     1     5       5     1     1     2     2     1     5       6     1     1     2     2     1     5       0     1     1     2     2     1     5       0     1     1     2     2     1     5       0     1     1     2     2     1     5       0     1     1     1     2     2     1       0     1     1     1     1     5       0     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     5       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8</td> <td></td> <td>Accession Charters at the</td> <td></td>							8		Accession Charters at the	
4     4     1     2     2       4     4     1     2     2       4     4     1     2     2       4     4     1     2     2       5     5     5       6     7     7     5       7     7     7     5       8     7     7     7       8     7     7     7       7     7     7     7       7     7     7     7       8     7     7     7       7     7     7     7       8     7     7     7       8     7     7     7       8     7     7     7       8     7     7     7	1 aso1 60/2/2		· ·				;		wicherspecture -	
0     V     V     V     Z     Z       0     V     V     V     Z     Z       0     V     V     V     Z     Z       0     V     V     V     Z     Z       0     V     V     V     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z     Z     Z     Z       1     Z     Z <td><u> </u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>*844527555563314384777</td> <td></td>	<u> </u>								*844527555563314384777	
0     1     2     2       0     1     2     2       0     1     2     2       1     2     1     2       1     2     1     2       1     2     1     2       1     2     1     2       1     2     1     1       1     2     1     1       1     2     1     1       1     2     1     1       1     3     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1       1     1 <td>+</td> <td>erentungus internet</td> <td></td> <td></td> <td></td> <td></td> <td>2.3 }</td> <td></td> <td>a Davinokaning heija dateo</td> <td></td>	+	erentungus internet					2.3 }		a Davinokaning heija dateo	
D     V     V     Z     V     V     Z       Refindquished, Br.     N     Paté     Time     Received by:     V     V       Refinquisited by:     On Ice?     Date     Time     Received by:     V     V       Samples Shipped VIA.     Air Freight     Frederal Express     Air Bill Number:     Air Bill Number:							<u> </u>	<b>.</b>	ng n	
Relinquished, Br.     Received by:     On-Icc?     Date     Time     Received by:       Relinquished by:     On Icc?     Date     Time     Received by:       Samples Shipped VIA:     Air Freight     Freight     Freight     Multiple	1530 4		<u> </u>						Z	
Refinduished, B./     N     On-Jec?     Date     Time     Received by:       Refinquished by:     N     N     N     N     N       Refinquished by:     N     N     N     N       Samples Shipped VIA:     Air Freight     Trouces     Date     Time										
Refinduished, Br.     On-Icc?     Date     Time     Received by:       Refinduished by:     Y n     Y n     Date     Time     Received by:       Refinduished by:     Y n     Y n     Date     Time     Received by:       Samples Shipped VIA:     Date     Express     Sampler     Air Bill Number:										
Refinquisited by:     On Ice?     Date     Time     Received by:     Mi       Samples Shipped VIA.     Air Freight     Freight     Freight     Freight     Air Bill Number:		+		0	Time	Received			Date	
Samples Shipped VIA: Air Freight Express Kampler			NOn X	<b>*</b>	Time	Received	N: BANG	A)		5
-	1	ed VIA: Air Freight	Federal Expre	ss Kampler		Air Bill N	umber:			



#### FIELD LOG COVER SHEET WATER SAMPLING

Client: U	more Park		Project No: 23/19-	0B05
Technician:	Kim Johannessen		Sampling Period:	April 10,13,14,15, 2009
Date	Temperature	Wind Speed	Wind Direction	Cloud Cover
4/10/2009 4/13/2009 4/14/2009 4/15/2009	36-52 45-55 42-52 46-60	5-10 5-15 5-10 5-15	NW ESE NE ESE	clear 80% clear clear

#### **Summary of Field Activities**

- * Masked duplicate M-1 was collected at MW-C7-004
- * Field blank FB-1 was collected through pump and tubing after purging MW-D5-308
- * Water elevations were measured prior to purging/stabilizing monitoring wells.



Client: UMU	RE		M	onitoring F	Point:	MINT	C2-	7 - 7
	Semount			ate:	4/16	/	66-	W6
	19-0805 Gu	AS:330	Sa	imple Time		<u>101</u> 50		
GENERA	L DATA		· .		ILIZATION			
Barr lock:	No-u							· . · .
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance
Total well depth:*	143.5	035/253	9.01	673	7.98	5	2,28	Clear
Static water level:*	66,29	0447/375	9.24	675	7.77	7	2.44	il
Water depth:*	11.0	0459 /4/9	9.41	678	7.67	8	2,66	U.
Well volume: (gal)		1013 / 63-	9,45	679	7.63	9	2.81	19 E
Purge method:	Submersible	1026 /353	9,48	682	7.56	10	2.73	:
Sample method:	й	938/882	9.52	681	7.51	12	2.60	11
Start time:	0910	Odor: n	öne	detic	ted			
Stop time:	1038	Purge Appea	arance: 2	gin - cl	ar- vo	en huc	lend-	Cleir
Duration: (minutes)	58 .	Sample App	earance:	Clear		/		
Rate, gpm:	1	Comments: Alkalinity = 247 me c (HARH) = 225 me = (Chemitrees)						
Volume, purged:	88 gal	Alkalini	ty -	247 me	e. (1	ttict)	J.	× ⁸ 6
Duplicate collected?	no		-	225 m	t = C	الالاستغراك ما	11.205	
Sample collection by:	KST, JUH	CO2-	Mi	12-	Fe(T)-		Fe2-	
Others present:	, 							
WELL INSPECTION (answ	er for each category, sta	ate if lock repla	ced, detail	any repairs ne	eeded on bac	k of form)		
CASING & CAP:	COLLA	R:		LOCK:			OTHER:	
MW: groundwater monitorin	g well WS: water s	upply well	SW: surf	ace water	SE: sedime	nt othe	er:	
VOC- semi-volatile	e- genera	il- 14/ nut	trient- / <del>/</del>	-/ _{cyanide}	- D	RO-	Sulfide-	
oil,grease- bacteria	a- total m	etal-	filtered r	netal-	metha	ne-	filter-	1
Others:					•			

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: U	tigre.		M	onitoring F	Point:	MANT	-07	13 M D
Location: R	semount			te:	4/10/	<u>1910-</u> 09.	-02-	002
Project #: Z3/				mple Time		220	- <del>)</del>	
GENERA					ILIZATION		·	
Barr lock:	No - U							
Casing diameter:	24	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance
Total well depth:*	76,6	1147 / 69	9.76	698	8.15	12	3,08	clear
Static water level:*	65.63	1151 18	9.84	721	7.89	14	4.38	11
Water depth:*	11	1155 10-	9.91	729	7.70	15	5,12	ri -
Well volume: (gal)	2	1159 /12,	9.95	738	7.53	14	5,60	11
Purge method:	St timer sible	1203/11/9	9.97	749	7.40	15	6.01	: //
Sample method:	. l (	1211/18-	10,03	758	7.32	15	6.49	3)
Start time:	1135	Odor: M	one .	de tec	terl			
Stop time:	1211	Purge Appea	arance:	bagin -	stightly	cline	ly/en.	Ochar
Duration: (minutes)	36	Sample Appe	earance:	Clear	/		(	
Rate, gpm:	1.5	Comments: A Kalinity = 2.74 mi (Hach) h = 2.55 mi (Chimitrics)						
Volume, purged:	18 gal	Alkalin	ity =	274 2	il ( 19	tack)	1	
Duplicate collected?	no			255	mi (C	himi	trics	
Sample collection by:	KSJ JDH	CO2-	Mn	2-	Fe(T)-		Fe2-	
Others present:				s				
WELL INSPECTION (answe	er for each category, sta	ate if lock repla	ced, detail a	any repairs ne	eeded on bac	k of form)	-	
CASING & CAP:	COLLA	R:	·····	LOCK:			OTHER:	
MW: groundwater monitorin	g well WS: water s	upply well	SW: surfa	ce water	SE: sedime	nt othe	er:	
VOC- semi-volatile	e- genera	1- <i>[1-1]</i> nut	rient- /+	/ cyanide	- DI	20-	Sulfide-	· · ·
oil,grease- bacteria	- total m	etal-	filtered m	etal- /	metha	ne-	filter-	1
Others:		· .			,			

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UM	RE	•	Мо	nitoring P	oint:	MW-	B1-0	01
Location: Ros	semount		Dat	e: 4	110/09	<u>r</u>	<u></u>	
Project #: 23/	19-0BOSG6	JAS330	) San	nple Time:	: 145	70 15	35	
GENERAL	DATA			STABI	LIZATION	TEST	· ·	
Barr lock:	NO-"u"	-				, , , , , <u>, , , , , , , , , , , , , , </u>		
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	рН	Eh	D.O.	Turbidity Appearance
Total well depth:*	72,0	1407 /3	10,21	523	.8,29	12	6.38	Char
Static water level:*	65,21	1419 44	10,18	517	8,18	13	6.85	U.S.
Water depth:*	6.8	1415/54	10,09	512	8.05	14	7,39	Ťŗ
Well volume: (gal)	hl	1419/67	10,17	507	7.93	.15	7,84	14
Purge method:	Submersible	1423/73	10.23	.503	7.81	16	8,30	· .
Sample method:	. <i>(</i> A.	1427/8j.	10:25	500	7.70	14	8.12	N
Start time:	1355	Odor: N	ene c	letect	ed			
Stop time:	1427	Purge Appe	arance:	Clear			····	
Duration: (minutes)	32.	Sample App	earance:	<u>Clear</u>				
Rate, gpm:	.25	Comments: A = 195  and  (44e4)						
Volume, purged:		Alkalinity = 195 ml (HACH) 180 ml (Chomitrics)						
Duplicate collected?	no		. ,	180	ne C	CPOMA 1	Trics)	
Sample collection by:	KSJ	CO2-	Mn	2-	Fe(T)	-	Fe2-	
Others present:								
WELL INSPECTION (answe	er for each category, st	tate if lock repla	aced, detail :	any repairs ne	eeded on ba	ck of form)		
CASING & CAP:	COLLA	AR:		LOCK:			OTHER:	
MW: groundwater monitorin	g well WS: water s	supply well	SW: surfa	ice water	SE: sedime	ent oth	er:	
VOC- semi-volatil	e- gener	al-171 пи	itrient- [+	1 cyanide	e- D	RO-	Sulfide-	
oil,grease- bacteria	a- total n	netal-	filtered n	netal- (	metha	ane-	filter	- /
Others:				•				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE Monitoring Point: MW-EZ-202								209		
Location: Ro	SEM OUNT		Da	Date: 4/13/09						
Project #: 23/	19-0B0561	JAS .337	Sa	mple Time	: 10	55				
GENERAL	DATA			STABI	LIZATION	ITEST				
Barr lock:	no									
Casing diameter:	.2"	Time/ Volume	Temp. ℃	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance		
Total well depth:*	127.2	1013/33.	9.30	479	6.95	-13	R.F.C	Clear		
Static water level:*	62.36	1024/149	9,31	482	6.89	-14	1,81	17		
Water depth:*	64.8	1035 / 55-9	<u></u>							
Well volume: (gal)		1046/660	146/669,54 490 6,83 -13 \$1.46 m							
Purge method:	Submersible									
Sample method:	. 1 i		·							
Start time:	0940	Odor: 1	ome c	detecte	d					
Stop time:	1046	Purge Appe	arance:	clear						
Duration: (minutes)	leb.	Sample App	earance:	Clear						
Rate, gpm:		Comments:			:					
Volume, purged:	66 gal									
Duplicate collected?	No	· · ·	. •							
Sample collection by:	KSJ, JDH	CO2-	M	12-	Fe(T)	)-	Fe2-			
Others present:			• • .							
WELL INSPECTION (answ	er for each category, s	tate if lock repl	aced, detail	any repairs n	eeded on ba	ck of form)				
CASING & CAP:	COLL	AR:		LOCK:			OTHER:			
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:										
VOC- semi-volatile- general- ² nutrient- ² cyanide- DRO- Sulfide-										
oil,grease- bacteria	oil,grease- bacteria- total metal- filtered metal- / methane- filter-									
Others:	·		· .							

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UN	IORE		R.A.	onit'				
Location: Ro	Semerno		1	onitoring ate:	. 8	MW-	E2-	- 009
	119-0PM-CU	ACON			4/13	109		
GENEI	RAL DATA	133.00	JSa	mple Tim		1210		
Barrlock:	No			STAE	BILIZATIO	N TEST		
Casing diameter:	24	Time/ Volume	Temp.	Cond.	•			
Total well depth:*	69.6	1140 /2	°C	@ 25	pH	Eh	D.O.	Turbidity Appearance
Static water level:*	62.89	10 Pri-	10:22	670	7.00	-5	3.23	clear
Water depth:*	6.7	191	10,26	<u>676</u> 686	6.93	-5	4.49	11
Well volume: (gal)	1.1			626	6,87	-6	5.09	11
Purge method:	Submerille							
Sample method:	11							:
Start time:	1125	Ddor: Nor	no de	tecte	1			
Stop time:	1200 F	Purge Appeara	/				,	
Duration: (minutes)	····	ample Appear		<u> 5-11-5</u> 1	lighty	<u>Clerdy</u>	y lond	-clear
Rate, gpm:	~	omments:		<u> 200</u>		/		
Volume, purged:	15 ged							
Duplicate collected?	no							
Sample collection by:	KSJ JOH CO	12-	Mn2-		_			
Others present:					Fe(T)-		Fe2-	
WELL INSPECTION (answer	for each category, state it	lock replaced	4				· · · · · · · · · · · · · · · · · · ·	
CASING & CAP:	COLLAD	een opiaceu, (	letall any re	epairs neede	d on back of	form)		
MW: groundwater monitoring v	COLLAR: well WS: water supply			OCK:		OTH	IER:	
VOC- semi-volatile-	general-	2	surface wa		sediment	other:		
oil,grease- bacteria-	total metal-	ndunem-		yanide-	DRO-	Sulfi	de-	
Others:		tilter	ed metal-	1	methane-	f	ilter-	

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

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Client: UMO	RE		Monitoring Point: $MW - EZ - 305$							
Location: Ro	Semount		Da	te: 4	13/0	~				
	19-0 BOS EU	1AS 331	Sa	mple Time:	135	55				
GENERAL	DATA			STABI	LIZATION	TEST				
Barr lock:	no			-				· .		
Casing diameter:	2"	Time/ Volume								
Total well depth:*	77.0	1310/159	10-09	707	6.79	-15	3,44	<u>Clear</u>		
Static water level:*	\$3,62	1320/254	320/25g 10,19 680 6.68 -12 3.80 m							
Water depth:*	Z3.4	1330/354	1330/359 10.21 663 6.57 -10 5.31 "							
Well volume: (gal)	4	1335 AQ	10/30	648	6.56	-8	6,87	11		
Purge method:	Submersible	1340/45-	10:28	641	6.45	-7	7.12	N		
Sample method:	<i>µ</i> (	1345750,	10.29	637	6,51	-8	7.49	11		
Start time:	1255	Odor: none detected								
Stop time:	1345	Purge Appearance: bigin - slight greenish hue level clear								
Duration: (minutes)	50.	Sample App	earance:	Clear						
Rate, gpm:	1	Comments:	•		;					
Volume, purged:	50 gal.			•	•					
Duplicate collected?	no									
Sample collection by:	KST, JDH	CO2-	М	n2-	Fe(T)	-	Fe2-			
Others present:			- 							
WELL INSPECTION (answ	er for each category, s	tate if lock repl	aced, detai	l any repairs n	leeded on ba	ck of form)				
CASING & CAP: COLLAR: LOCK: OTHER:										
MW: groundwater monitoring	ng well WS: water	supply well	SW: sur	face water	SE: sedim	ent ott	ner:			
VOC- semi-volati	le- gener	ral- Z ni	utrient-	Z_ cyanid	e- I	DRO-	Sulfide-			
oil,grease- bacteri	a- total r	netal-	filtered	metal- /	meth	ane-	filter	- /		
Others:		· · · · ·	· · ·							

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMOK	Client: $UMORE$ Monitoring Point: $MW - E4 - 010$							210	
Location:	-		Dat	e:	4/13/0	09.			
Project #: 23//	9-CBOSEN	48.330	San	nple Time	140	5			
GENERAL				STABI	LIZATION	TEST			
Barr lock:	20	· ·							
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance	
Total well depth:*	73,6	1520/159.	10,64	686	6,86	-10	6.42	dear	
Static water level:*	57,42	1530/253	1530/253 10:75 689 6.84 -9 6:95 11						
Water depth:*	16.2	1535/30-							
Well volume: (gal)	2.6	154/35	10,57	692	6,70	-6	7.89	4	
Purge method:	Submersitye	154574	10,50	693	6.67	-6	8.29	$t_l$	
Sample method:	. i l	1535-453	1056	693	6.70	-5	8.54	t.i	
Start time:	1505	Odor: $\gamma$	10m	detec	teel				
Stop time:	1455	Purge Appearance: begin - slightly Cloudy knd- clear							
Duration: (minutes)	45.	Sample App	earance:	<u>élear</u>	- · /		/		
Rate, gpm:	1	Comments:			، بر چندر	-y,	ر ن ^ی را	1 march	
Volume, purged:	45 gal	Alkai	inity	fortal	= 20	CZ M	)∕.( (	(HHert) Chemotrice	
Duplicate collected?	no	. K		• • •	4	UU M	-g/.k (	Cleanting	
Sample collection by:	KSJ, JDH	CO2-	Mi	n2-	Fe(T	)	Fe2-		
Others present:									
WELL INSPECTION (ansv	ver for each category, s	state if lock rep	laced, detail	any repairs	needed on b	ack of form)	)		
CASING & CAP: COLLAR: LOCK: OTHER:									
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:									
VOC- semi-volatile- general- 2 nutrient- 2 cyanide- DRO- Sulfide-									
oil,grease- bacteria- total metal- filtered metal- methane- filter-									
Others:			•		•				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: Umo	re (uofi	n )	Mor	Monitoring Point: $MW - D3 - 007$						
	mount		Dat	Date: 4/14/09						
	19-0Bas 61	UAS 330	San	ple Time:	10	40				
GENERAL	DATA			STABIL	IZATION	TEST				
Barr lock:	mo ·			. :						
Casing diameter:	2*	Time/ Volume	Temp. ⁰C	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance		
Total well depth:*	71,8	0940/ 83.	9,89	662	7.56	81	3. H	Clearing		
Static water level:*	60.97	0950/13-	9.73	641	7.44	106	5,34	Clear		
Water depth:*	10.8	1000/ 183	100/183 9.84 640 7.45 112 6.47 "							
Well volume: (gal)	1.8	1010/23;	1010/23, 9,90 630 7.30 139 6.89 "							
Purge method:	Submersible	1020/28/	020/28 9.95 637 7.27 153 7.38 "							
Sample method:	21	1030 / 332	030/33, 9.93 636 7.29 158 7.81 "							
Start time:	0925	Odor:	hone	deter	eted					
Stop time:	10.30	Purge Appe	Purge Appearance: bogin - slighty cloudy lend - clear							
Duration: (minutes)	66 .	Sample App	earance:	Clien						
Rate, gpm:	.5	Comments:			:					
Volume, purged:	33 _{gal}									
Duplicate collected?	710									
Sample collection by:	KST DH	CO2-	Mr	2-	Fe(T	)-	Fe2-			
Others present:		•			ma					
WELL INSPECTION (answ	ver for each category, s	tate if lock rep	laced, detail	any repairs n	leeded on ba	ack of form)				
CASING & CAP:	COLL	AR:		LOCK:	· · ·		OTHER:	<u>.</u>		
MW: groundwater monitori	ng well WS: water	supply well	SW: surf	ace water	SE: sedin	ient ot	her:			
VOC- semi-volati	le- gene	ral- Z n	utrient-	cyanid	e	DRO-	Sulfide-			
oil,grease- bacter	ia- total ı	metal-	filtered	metal-	meth	nane-	filte	r-		
Others:	· · · · · ·	•								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: // MOK	E Park (	( UOFM)	Mor	nitoring Po	oint: M	1w - D	5-30	3		
Location: Rose	emount	,	Dat	e: 4	1 Innell	9				
Project #: 23	119-0R05E	WAS 33	🖰 🛛 San	ple Time:	13	10				
GENERAL				STABIL	IZATION	TEST				
Barr lock:	No	•								
Casing diameter:	24	Time/ Volume								
Total well depth:*	76.8	1210/153	210/15g 14, 14 594 8.20 +150 3,93 Clear							
Static water level:*	65,01	1220/209	20/200 14/100 587 7197 112 4.87 W							
Water depth:*	11.8	1230 / 25g	30/253 13,89 591 7,80 121 5,24 "							
Well volume: (gal)	2	1240/302	14.05	582	7.63	132	5.74	21		
Purge method:	Submissible	1252/354								
Sample method:	4(	1300/ 402	14,31	578	7.43	14Z	6.21	н		
Start time:	1/55	Odor: Clear								
Stop time:	1300	Purge Appe	Purge Appearance: pagin - slightly cloudy land-clear							
Duration: (minutes)	3C ·	Sample App		· · · · ·	2		·			
Rate, gpm:	.25	Comments:	Equ	priest	- blian	k F	B-1	. t		
Volume, purged:	40 gal	Colo	lected	the ou	yh 7	sany	- tub	135		
Duplicate collected?	FB-1	.UT721  .U(T721	1335)	U- 05	-308	S Di	-con	•		
Sample collection by:	KSJ	CO2-	Mr	12-	Fe(T	)	Fe2-			
Others present:			۰.		<u></u>					
WELL INSPECTION (answ	ver for each category, s	state if lock rep	laced, detail	any repairs r	needed on ba	ack of form)				
CASING & CAP:	CASING & CAP: COLLAR: LOCK: OTHER:									
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:										
VOC- semi-volatile- general- 2 nutrient- 2 cyanide- DRO- Sulfide-										
oil,grease- bacter	ia- total	metal-	filtered	metal-	/ meti	nane-	filte	r- /		
Others:					•					

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: 12 Mol	Client: 12 MORE PACK (Usfm) Monitoring Point: MW-43-003									
Location: Rose	mount		Dat	e: 4	4/14/0	9				
Project #: 23/10	1-OBOS GWT	45330	San	nple Time:	1.5	40				
GENERAL				STABI	LIZATION	TEST				
Barr lock:	No	- - -								
Casing diameter:	24	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance		
Total well depth:*	83,8	1458/49	11.49	583	7.48	139	7,69	Slightly		
Static water level:*	72.07	1508/7-3	11,48	582	7.41	154	7.57	11		
Water depth:*	11.7	1518/99.	11.57	581	7.40	170	1.53	Char		
Well volume: (gal)	2	1528/ ₁₁₄	11.42	580	7.43	178	7.59	<i>i1</i>		
Purge method:	Submersible									
Sample method:	11									
Start time:	1443	Odor: M	Odor: now detected							
Stop time:	1528	Purge Appe	Purge Appearance: Chigo bream - Cloudy brown bod-							
Duration: (minutes)	44	Sample App	earance:	Clear_	1					
Rate, gpm:	, 25	Comments:	•							
Volume, purged:	Ilgol									
Duplicate collected?	2/20						. •			
Sample collection by:	KSJ	CO2-	M	n2-	Fe(T	·)	Fe2-			
Others present:			• •			N-2-1				
WELL INSPECTION (ansu	ver for each category,	state if lock rep	laced, detai	I any repairs	needed on b	ack of form	)			
CASING & CAP:	COLL	AR:		LOCK:			OTHER	·		
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:										
VOC- semi-volat	ile- gene	eral- Zr	nutrient- 2	<u> </u>	de-	DRO-	Sulfide			
oil,grease- bacter	oil,grease- bacteria- total metal- filtered metal- methane- filter-									
Others:	с. А			 						

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMOR	E PARK (	Uof M)	) N	lon	itoring Po	int: //	$M_{U} - C$	:7-00	4		
	emout			Date: 4/15/09							
	1-0BOSGWA	5 330	S	am	ple Time:	101	10				
GENERAL					STABIL	IZATION	TEST				
Barr lock:	NO						-				
Casing diameter:	24	Time/ Volume	Temp. ⁰C	•	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance		
Total well depth:*	92,0	0920/ 4/3.	10:5	Z	617	7.45	94	6.12	Slightly		
Static water level:*	71.50	0930/79	10.6	,5	631	7,32	83	6,39	n l		
Water depth:*	20,5	0940/103	10,7	-/	639	7,23	78	679	Clearing		
Well volume: (gal)	3,3	0950/135	10.8	30	647	7.17	87	7.10	clear-		
Purge method:	Submersible	1000/16g	10,8	1	655	7.21	106	7.25	<i>î</i> l		
Sample method:	n					12					
Start time:	0905	Odor: 7	1 ON	C	leteet	teel					
Stop time:	1000	Purge Appe	earance:	be	gin - C	lovely a	lark bo	our/en	D- deat		
Duration: (minutes)	55	Sample Ap	pearanc	e:	. clea	<u>(~5</u>	ligot	ty ch	ondy		
Rate, gpm:	.25	Comments:		į		:	100	31	(Unein)		
Volume, purged:	16 gal	AKal	Init	y	= (+*	橋()	286	1 19. C	(HACH) (chemithes		
Duplicate collected?	M-1		, Ei			(	s col				
Sample collection by:	KST, JDH	CO2-	. •	Mn	12	Fe(T	)-	Fe2-			
Others present:							-				
WELL INSPECTION (ans	wer for each category,	state if lock rep	placed, d	etail	any repairs i	needed on b	ack of form)	)			
CASING & CAP:	COLI	LAR:	·····	• .	LOCK:			OTHER	:		
MW: groundwater monitor	ing well WS: wate	r supply well	SW:	surf	ace water	SE: sedir	nent of	ther:			
VOC- semi-vola	tile- gene	eral- 2+2	nutrient-	. 2	-+ 2cyanic	le-	DRO-	Sulfide	-		
oil,grease- bacte	ria- total	metal-	filte	red	metal- / 1	+ / met	hane-	filt	er-		
Others:											

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: MMDRE	FRANK (1	1 DIAN	Мог	nitoring Po	oint:	MAIN-	46-0	<i>bl</i> .
		(of M)	Dat		T1510	9	100	<u> </u>
	emount_	1550		nple Time:	: 115	,70		
GENERAL	-0B05 GWAS	330						
Barr lock:	no							
Casing diameter:	2"	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance
Total well depth:*	114,0	1113/159	11:37	583	7.40	48	(a73	Stightly
Static water level:*	83,54	1123/20g	11.28	596	7.28	67	6.89	clearing.
Water depth:*	30,5	1133/305	11.31	599	7.37	96	7.29	clear-
Well volume: (gal)	5	1143/40,	11.37	604	7.42	107	7.34	ч
Purge method:	Submersible	/						
Sample method:	. U							
Start time:	1058 Odor: none detected							
Stop time:	1143	43 Purge Appearance: Degin- cloudy brown land- clear						
Duration: (minutes)	45	Sample App	pearance:	Clia				
Rate, gpm:	. 1	Comments:	· ·		:			
Volume, purged:	40 gal							
Duplicate collected?	no							· .
Sample collection by:	KST, JDH	CO2-	M	n2-	Fe(T	·)-	Fe2-	
Others present:	1		•					
WELL INSPECTION (answ	wer for each category,	state if lock rep	placed, deta	I any repairs	needed on b	ack of form	) .	
CASING & CAP:	COLI	_AR:	. •	LOCK:	·		OTHER	
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:								
VOC- semi-volat	tile- gene	eral-2	nutrient-	Z cyani	de-	DRO-	Sulfide	-
oil,grease- bacte	ria- total	metal-	filtered	metal-	met	hane-	filt	er- /
Others:				· · · ·				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Client: UMORE	Mor	Monitoring Point: MW-C4-311								
	E PARK (U. emount	of M)	Dat	e: 4	111510	19				
Project #: 23/10	1-0 Bas Gu	1A5 330	) San	nple Time:	135	5				
GENERAL		<u> </u>		STABIL	IZATION	TEST				
Barr lock:	NO						Ĺ			
Casing diameter:	2 ⁿ	Time/ Volume	Temp. ℃	Cond. @ 25	pН	Eh	D.O.	Turbidity Appearance		
Total well depth:*	94,3	1300/15-	11.32	4/82/	7.82	-129	1.76	Cloudy		
Static water level:*	61.4.1	1310/243	11.32	489	7.70	- 79	1.90	Clear 1		
Water depth:*	33	1320/25-	11,30	486	7.60	- 50	2.59	£(		
Well volume: (gal)	5.4	1330/952	11.32	487	7.57	- 28	2.97	1/		
Purge method:	Sabmersible	1340/553	11.38	48.5	7.55	15	3,20	<u>u</u>		
Sample method:	11									
Start time:	1245	Odor: 7								
Stop time:	1340	Purge Appe	Purge Appearance: Begin-Slig Why cloudy land. clear							
Duration: (minutes)	55.	Sample Ap	pearance:	Clean			£ 			
Rate, gpm:	ļ	Comments:			:					
Volume, purged:	.55 gal				•					
Duplicate collected?	710		•					•		
Sample collection by:	KSJ, JDH	CO2-	M	n2-	Fe(1	_)-	Fe2-			
Others present:						<u> </u>	<u>.</u>			
WELL INSPECTION (answ	wer for each category,	state if lock rep	placed, deta	il any repairs	needed on b	ack of form	) 			
CASING & CAP: COLLAR: LOCK: OTHER:										
MW: groundwater monitoring well WS: water supply well SW: surface water SE: sediment other:										
VOC- semi-volat	tile- gene	eral-Z	nutrient-Z	cyani	de-	DRO-	Sulfide	-		
oil,grease- bacte	oil,grease- bacteria- total metal- filtered metal- methane- filter-									
Others:			. · · ·			• •				

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

#### BARR ENGINEERING COMPANY METER CALIBRATION SUMMARY

PROJECT U More Park	
TECHNICIAN KSJ, TDH	

#### WEATHER CONDITIONS

Date	· Wind	Wind	Temperature	Cloud	Comments
Date	Direction	Speed	F	Cover	
4/10/09	M	5-10	36-52	Clear .	
4/13/09	ese	5-15	45-55	80%.	
	1		·		
4114109	NE	5-10	412-55	Clear	
4/15/09	ESE	5-15	46-60	clear	
	•			· .	
		<u>.</u>			
		·	· .		
			· · ·		
1					
	·				

						-	
Meter type	Date	Time	Temperature	Standard	pH Meter	Cond. Cell	ORP
and number			.c	Solution	Reading	Result	Reading
VS1 556	4/10/09	0830	13	7/10	1,00/1000	1000 under	246 M
1 A	4/13/09	(84n	el ·	7/10.	7,00/10,00	10 BO Walter	249 ma
	- graph			·			
	4/14/19	0835	8	7/10.	7.00/10.00	1000 Lenghors	
11	. 4/15/09	0840	.10	7/10	3.00/11.Co	1000 ulity	
	<u> </u>			•			· .
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231+,-10mV @ 25C 231mV = Display Value + [(Display Temp. - 25 C) x (1.3 mV]

UMP005384

Г			, <u>, 1</u>	1	T		1		T	1	1	90/10	1	5 18 mic	F Custody F	0 nisdO/6	PEORMS	ITS/9JA:H
		Ime dem MSH SS	N. C	1.7												Time	Time	
	of	ager:	L C. C.	10	e ^{tter} tallessegere		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1									Date	Date	
	COC	Project Manager: Project Contact:_ Sampled by:	Laboratory:	See. a		· · · · · · · · · · · · · · · · · · ·											L 175	lber:
		Of Containers	oval No.	N.	S	Ń	ş										1000	
		· · · · · · · · · · · · · · · · · · ·														_		
		(plastic vial, unpres.)														-	1°. V.	
	Soil	or 4-oz unpreserved) 2* (.sərqnu so				ļ					_					Received by:	d by:	Air Bill Nur
tive		z tared) - 25 grams	DKO (5-0	1				_								ceive	Received	Bill
erva		I*(HOAM baret zo-2) X	СКО, ВТЕХ													-Re-	Re	Air
Number of Containers/Preservative	Н	I*(HO+M b+1st zc	VOCs (2-0	<u> </u>													1)	
lers/				1						_	_			<u> </u>			T'ime	
ntain	╏┠																	Samples Shipped VIA: Air Freight Federal Express Sampler Orther Onther Orther States Arriver A
Col		(I) (£0 ⁷ S ⁷ ¤N	DKO (HC					-								$\frac{1}{2}$		
ir of		( 0 - 5 - 0 N	Methane Basteria									_				Mate /	Date	pler,
mbe	Water	(sisisoA n	Z) əbiilu2									+				1	5	Sampler
Nu	≩	$(H_2OO_4)$ + $(H_2OO_4)$			8	6. 5		-					_			Ice?	lce? N	ss .
COLUMN THE OWNER		(HOby) ★* ( [↓] OS ₂ H)	Cyanide (1 Nutrients	N	0	Er.						_			,	5	On Ice? Y N	Expre
		Unpreserved) *3	General (	E.S.	1.7	and a second									31.1		-	Federal Express
		sls (HNO ₃ )																
	╞	ile Organics *2 Metals (HNO3)	Dissolved	Mathanika Shiriya	Cl Silverinet	and the state of the							_			1		ight _
	-	I*(.2519) estimation II						+			·					-		☐ Air Freig □ Other
			OC o												***	1 3		
		23.53	Comp. Type		- Junio	1 de							-			<u>ار</u> ق	By:	VIA: UL:
			. <u>×</u>		<u>~</u>				-	-	-	-			1	shed	shed	ipped
			Soil Matrix													inbu	'nð	les Sh
			Water Z	7	and the second	ation .	·						<u></u>			Relinquished By:	Relinguished By:	Samples Shipped VIA: Air Freight
		803 51 6-1	ction Time	1059	230	-										A STATE OF A	interest of the local division of the local	
•	ustody	uh Street MN 55435-4803 00, B, 0, S, G, U, A	Collection Date T		ectarbox ar	- Ju										- Preservati TPH, Full Li	.P, Dioxins, H	Alkalinity, T Ammonia
	Chain of Custody	4700 West 77th Street Minneapolis, MN 55435-4803 (952) 832-2600 r	le	WW- 02-202	MW-02-002	-49										Common Parameter/Container - Preservation Key *1 - Volatile Organics = BTEX, GRO TPH, Full List	*2 - Temivolatile Organics = PAHs, PCP, Dioxins, Full List	<ul> <li>2. General = pH, Chloride, Houride, Alkalinity, TSS,</li></ul>
			Sample Identification	N.C.		M. B1-W										nmon Parame 'olatile Organics	Emivolatile Organics = 1 Erbicide/Pesticide/PCBs	One Table = DT, C OS, TS, Sulfate $OD = COD$
					ri k	ب	4.	Ś	6.		×.	6	10.	11.	12.	- <u>1</u> -1	2 S	, <b>*</b>

and a start

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	COC of of	Project Manager: JME	Project Contact: MSH	Sampled by: KSJJ0H	Laboratory: Lagend	Remarks:	See attacked list												Date Time	V III Date Date		2.(
	1	12	ənisino	Of C	.oN It	stoT	<u>I</u>	N			10			$\frac{1}{\sqrt{2}}$	V V	1 10	th	5				Coordin
servative	Soil	5 grams MeOH)*I	-02 nul 1916261 2 - (pa	2 01 4 2 10 2 2 01 4 2 01 4	OCs (2 0 (2-0 0 (2-0 0 (2-0	SVC Met DR							· · · · · · · · · · · · · · · · · · ·						Received by:	Received by:	Air Bill Number:	Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator
ters/Pre																			Time	Time		w - Fie
Number of Containers/Preservative	ler			2A nZ (15 (15)	ទុំពនាដ	Bac				-						· · ·			4/Bate/04	² Dafe	Šampler	it to Lab; Yello
Nun	Water	) † )	)S ⁷ H) 3 ** (*0	Grease	pue	0!I	S	~	2	17	2	2	N	N		2	2	2	Orn lee?	On Ice?	press M	Shipmer
		( [£] O)	eserved HNO ₃ )	I) elet		toT 190	2	f To		2						Ň		N		ōŕ	Federal Ex	ccompanies
			rganics		alovin	ıəS												<u> </u>	annosa		Air Freight	iginal A
			5 230	<b>7</b> 8285	G du	QC Cor Cor	, ,	<u>`</u>	<u>}</u>		i ve		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			j j		2	Retinquished By: / a	Relinquished By:	Samples Shipped VIA: Air Freight Treight Express Kampler	on: White-Ori
			44.			isW lio2	, 	<u></u>	7	7	7		d.			ć.	er (	7	Relinqui	<b>Rélinqu</b> i	Samples Sł	istributic
		4803	S D	Н	Collection	Time	055	1210	1355	1605	1040	13/0	1335	0/25/	10/0	1150	1335	-				Q
Chain of Custody	Custody	77th Street 8, MN 55435-4803 2600 O.B.O.S.G.W.A.S.33C 26362 26362	∠⊂ Colle	Date	4/1369	5. 	-christen and species	Ł	4/H/M	ау 	under of Levin and Levin		4/15/09	Per kana panan	Ż	->	- Preservat	CP, Dioxins, 1	e, Alkalinity, 1 Ammonia			
	Chain of	BARR Minneapolis, MN 55435-4803 (952) 832-2600	1,9,-	Project Name	Sample Identification	Υσεπητητατισ	1. MM-E2-209	2. MW-E2-009	3. MW-EZ-305	4. MW-E4-010	5. MW-D3-007	". MW-D5-308	1. 43-1	8. MW - 13-063	9. MW - C7 - 0004	10. MN/-A6-006	". MN- CY-31	1-11	Common Parameter/Container - Preservation Key *I - Volatile Organics = BTEX, GRO TPH, Full List	*2 • Emivolatile Organics = PAHs, PCP, Dioxins, Full List, Echicide/Pesticide/PCBs	<ul> <li>*3 - Coneral = pH, Chloride, Flouride, Alkalinity, TSS, PDS, TS, Sulfate</li> <li>*4 - Sourients = COD, TOC, Phenols, Ammonia</li> </ul>	Brogen, TKN

***^{**}

# WATER LEVEL SUMMARY

Date:

# Project: UMORE PARK

#### Project Number: 23/19-0B05

Environmental Staff: KSJ, TOH

	Monitoring	Magginie	TTT			
	U U	Measuring	Water	Total	Static	
	Location	point	level	well	water	Comments
;		elevation	depth	depth	elevation	
¥	MW-B1-001	949.29	65,21	72.0		4/10/09
¥	MW-C2-002	951.17	65,63	76.6		4/10/09
*	MW-C2-202	951.88	66,29	145.7		4/10/09
	MW-A3-003	942.95	72,07	83.8		4/14/09
*	MW-C7-004	930.32	71,50	92.0		4/15/09
	MW-E2-305	940.73	53.62	77.0		4/13/09
	MW-A6-006	935.41	83.54	114.0		4/15/09
	MW-D3-007	945.49	60,97	71.8		4/14/09
	MW-D5-308	936.86	65.01	76.8		4/14/09
	MW-E2-009	949.37	62.89	69.6		4/13/09
ļ	MW-E2-209	948.85	62,36	127.2		4/13/09
*	MW-E4-010	940.15	57.42	. 73.6		4/13/09
	MW-C4-311	935.96	61.41	94.3		4/15/09
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#### Table E-1 Comparison of Field and Laboratory Alkalinity Data Groundwater Assessment Report UMore Mining Area Dakota County, Minnesota

	Units	MW-C2-002 4/10/2009	MW-C2-202 4/10/2009	MW-B1-001 4/10/2009	MW-E4-010 4/13/2009	MW-C7-004 4/15/2009
Total Alkalinity (Hach Kit) (Field)	mg/L as CaCO3	274	247	195	222	282
P. Alkalinity (Hach kit)* (Field)	mg/L as CaCO3	0	0	0	0	0
Total Alkalinity (Chemets Kit) (Field)	mg/L as CaCO3	255	225	180	200	260
pH (Field)	S.U.	7.32	7.51	7.7	6.9	7.21
Bicarbonate Alkalinity (Lab- Legend)	mg/L as CaCO3	290	260	210	250	320

Phenolphthalein (P.) Alkalinity equals zero based Hach Field kit method. Bicarbonate alkalinity is equal to total alkalinity when Phenolphthalein alkalinity equals zero