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 | | - | | | |



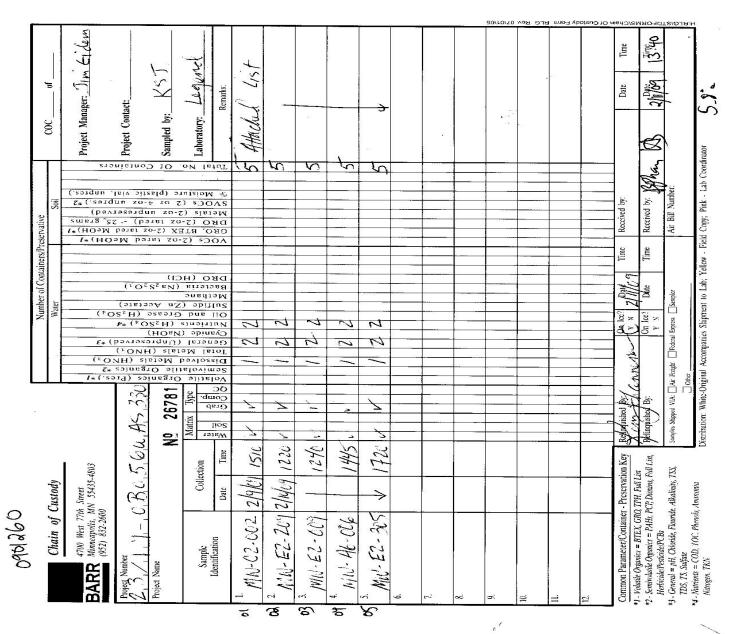
| Barr Engineering Co. | Project: | 23/19-0B05 | | |
|-----------------------|------------------|-------------------|----------------|----------|
| 4700 W 77th St | Project Number: | 23/19-0B05GWAS330 | Work Order #: | 0901260 |
| Minneapolis, MN 55435 | Project Manager: | Ms. Marta Nelson | Date Reported: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

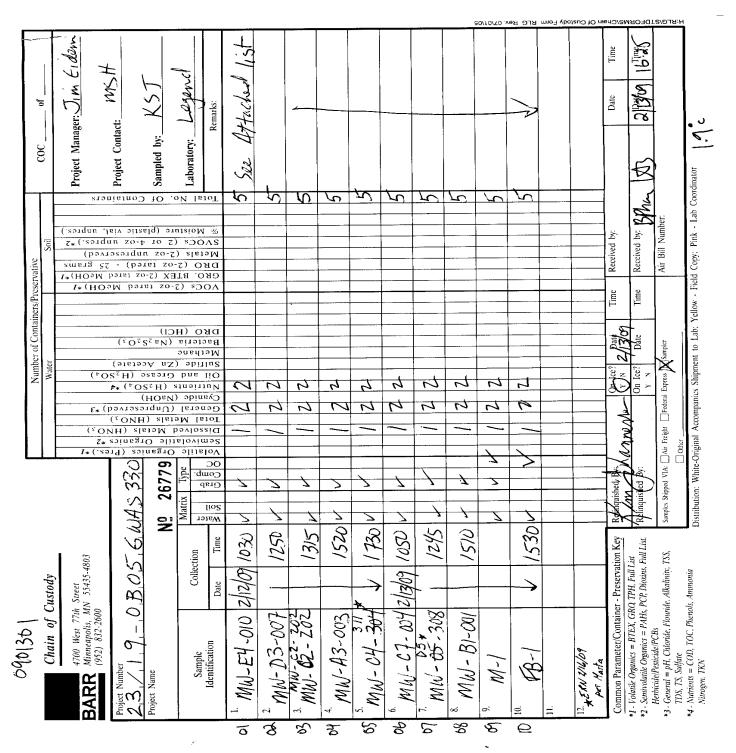


| Barr Engineering Co. | Project: | 23/19-0B05 | | |
|-----------------------|------------------|-------------------|----------------|----------|
| 4700 W 77th St | Project Number: | 23/19-0B05GWAS330 | Work Order #: | 0901301 |
| Minneapolis, MN 55435 | Project Manager: | Ms. Marta Nelson | Date Reported: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

.



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 |

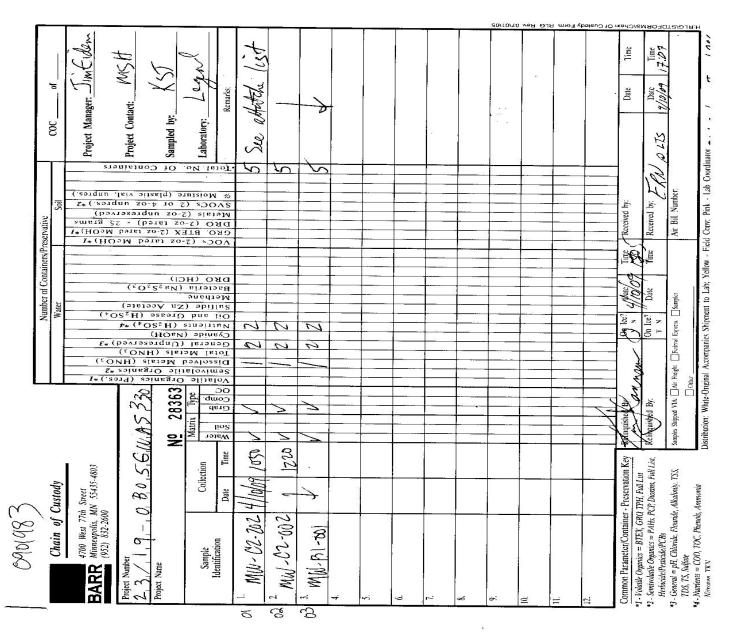
Notes and Definitions

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 |

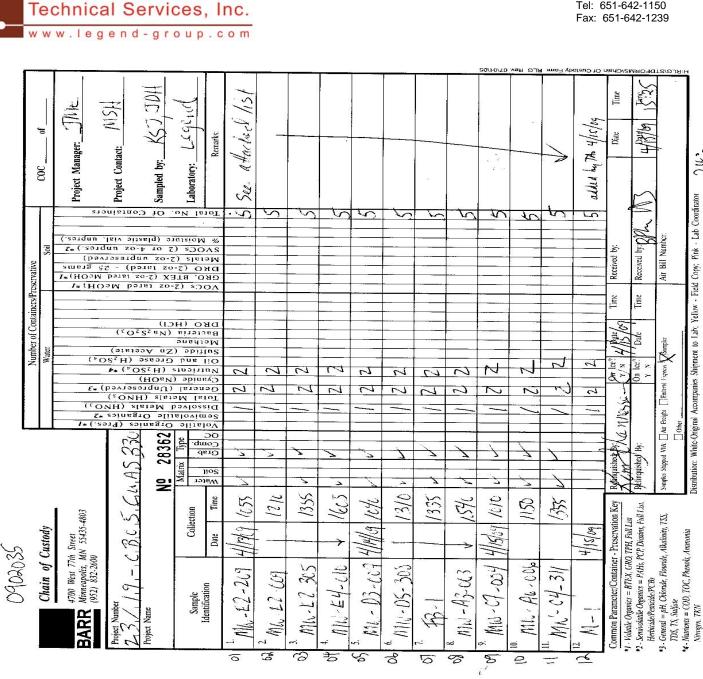
Analytical Results - Quality Control Davy Laboratories, Inc.

| 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 | | | | | 、 | | | | |
| 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) |) | | | |
| 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 | } ∙ |
| 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 | |
|---|------------------------|----------------------------------|-------------------|----------------------|-------------|--------------|--------|---------------------------------------|--|
| / | 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- | . | |
| 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 | 9- | |
| 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 | }- |
| 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 | [)- | 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 |) . \ |
| 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 |)- |
| 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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| 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 | |
| BARR Minneapolis, MN 55435-4803 (952) 832-2600 | Street N 55435-48 | 03 | | | 7* 7* (*50 | · | | (*0 | | | I *(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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| 9. | · · · · · | | | | | | | | | | | | | | | | |
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| 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" | |

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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 |
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| 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 <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 | |
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| 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 | * | 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- / / | -/ _{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 | -) | |
| 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: γ | 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 | |
| | • | | | · . | |
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|------------|---------------------------------------|---------|-------------|----------|------------|---------------|---------------------------------------|
| 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 | |
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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 | |
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| | | (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 | 2. General = pH, Chloride, Houride, Alkalinity, TSS, |
| | | | 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 | , * |

and a start

| ~ | | | | | | | | | | | 1 1 | · · | | | 90/10\2 | 0 v9A Đ | Form RL | (boteuO t |) nisrtO/a | SMAO3 | ארפוצדנ: | H |
|-----------------------------------|-----------|--|--------------------------------|--------------------------------------|--------------------------------------|------------------|-----------------------|--------------|--------------|--------------|--------------------------|--------------|---|----------------------|-------------------|----------------|--------------|----------------|--|---|---|---|
| | 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 | 7 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 | Rélinqu 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 | *3 - Coneral = pH, Chloride, Flouride, Alkalinity, TSS, PDS, TS, Sulfate *4 - Sourients = COD, TOC, Phenols, Ammonia | Brogen, TKN |

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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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T00006 - 69.83. TOE Top of Riser

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