

The Reno Creek Project - Monitor Well Sampling Report

AUC LLC

| | | | | | | | |
|--------------|---------|--------------|----------|-------------------|------|---------------|----|
| Location ID | PZM7 | Sample Date: | 12/20/11 | Sampling Company: | TREC | Sampled By 1: | TN |
| Sample Event | Q3-2011 | | | | | Sampled By 2: | WC |
| | | | | | | Sampled By 3: | |

Well Information:

| | | | | |
|-----------------------|-----------------|-----------------------|-------------------------------------|-------------------|
| Well Total Depth (TD) | 318 | ft | Well Measuring Point (MP) Location: | North Side-Marked |
| Sampled From: | Monitoring Well | Well Inside Diameter: | 4.5 | inches |
| Screened Interval: | 298 | Feet to | 318 | Feet |
| | | Pump Type Used: | Dedicated Low Flow Bladder | |
| | | Pump Intake Depth: | 308 | ft |
| | | Tubing Type: | Dedicated Plastic | |

Well Fluid Measurements:

| | | | | | | | |
|---------------------------------|-----------------|----------|----------|----|------|-------------|------------------|
| Time (military): | 1045 | Weather: | Air Temp | 32 | (°F) | Conditions: | Sunny and breezy |
| Water level gauged using: | Electronic tape | ft | | | | | |
| Depth to Water (DTW) below MP: | 185.25 | ft | | | | | |
| Water Column Height (TD-DTW): | 0 | ft | | | | | |
| Water volume = $\pi r^2 h$ (cf) | 0.00 | gallons | | | | | |
| 3 Well Volumes: | 0.00 | gallons | | | | | |

| | | | | | |
|--|-------------|-------------|-------------|-------------|------------|
| Well volume (in gal / LF) = πr^2 (cf) where: π = pi (approximately 3.14); r = radius of monitoring well (feet) cf = conversion factor (7.48 gal/ft ³); | | | | | |
| Well ID (in) | 2 | 3 | 4 | 4.5 | 5 |
| Water Volume (gal/LF) | 0.163188147 | 0.367173331 | 0.652752589 | 0.826139995 | 1.01992592 |

Purging:

| | | | | | | | | |
|----------------------------------|----------------------------|------------------|------|------------------------------------|----------------|----------------|-------------------------|----------|
| Purge Date | 12/20/11 | Purge Time Begin | 1100 | Low Flow Pump Controller Settings: | Charge Time | 4 | Exhaust Time | 26 |
| Purge Pump Type: | Dedicated Low Flow Bladder | Pumping Rate: | 350 | ml/min | Meter Type(1): | YSI Multi | Meter Calibration Date: | 12/19/11 |
| Volume Purged Prior to Sampling: | 2.5 | gallons | | | Meter Type(2): | Hach Turbidity | Meter Calibration Date: | 12/19/11 |
| | | | | | Meter Type(3): | | Meter Calibration Date: | |

Field Stabilization Measurements:

| Sample ID | Purge Date | Time (min.) | Purge Rate (ml/min) | Purge Rate (gal/min) | Temp (°C) | Conductivity (µmhos/cm) | DO (mg/L) | pH (su) | ORP (mV) | Turbidity (NTU) | Water Level (ft) | Comments | |
|---------------------------------|------------|-------------|---------------------|----------------------|-----------|-------------------------|-----------|---------|----------|-----------------|------------------|----------|--|
| PZM7-003-111220 | 12/20/11 | 11:10 | 350 | | 9.26 | 1155 | 7.20 | 11.45 | 50.4 | 30.3 | 185.02 | | |
| | | 11:13 | 350 | | 9.60 | 2290 | 1.77 | 11.94 | -6.4 | 29.0 | 185.07 | | |
| | | 11:16 | 350 | | 9.62 | 2846 | 1.45 | 12.05 | -23.7 | 15.0 | 185.14 | | |
| | | 11:19 | 350 | | 9.58 | 2929 | 1.18 | 12.09 | -35.2 | 10.0 | 185.16 | | |
| | | 11:22 | 350 | | 9.58 | 2915 | 1.12 | 12.10 | -38.5 | 25.0 | 185.21 | | |
| | | 11:25 | 350 | | 9.75 | 2839 | 0.97 | 12.11 | -43.7 | 30.0 | 185.23 | | |
| | | 11:28 | 350 | | 9.70 | 2773 | 0.94 | 12.12 | -43.6 | 18.0 | 185.24 | | |
| | | 11:31 | 350 | | 9.75 | 2774 | 0.89 | 12.13 | -42.8 | 10.0 | 185.26 | | |
| | | 11:33 | 350 | | 9.74 | 2831 | 0.79 | 12.14 | -41.0 | 9.0 | 185.28 | | |
| | | 11:36 | 350 | | 9.72 | 2843 | 0.73 | 12.14 | -41.1 | 8.1 | 185.30 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Repeat Last Stabilization Meas. | | | | | | | | | | | | | |

Sampling:

| | | | | | | | |
|-------------------|----------------------------|------------------------------|------|----------------|----------------|---------------------------|----------|
| Sample Date | 12/20/2011 | Sample Collection Time (MT): | 1145 | Meter Type(1): | YSI Multi | Meter 1 Calibration Date: | 12/19/11 |
| Sample Pump Type: | Dedicated Low Flow Bladder | | | Meter Type(2): | Hach Turbidity | Meter 2 Calibration Date: | 12/19/11 |
| | | | | Meter Type(3): | | Meter 3 Calibration Date: | |

Analysis:

| | | | | | | | |
|----------------|--|-----------------------|--|--------|---------|-------|-----|
| QA/QC Sample | | QA/QC Type | | COC#1: | RC08159 | Lab 1 | IML |
| Duplicate Name | | Duplicate Sample Time | | COC#2: | | Lab 2 | ALS |
| | | | | COC#3: | | Lab 3 | |

Analysis: Table 1- 4.14, Guide 8, & Radon 222

Comments:

Purged one gallon prior to stabilization in order to flush lines; developed a leak down well so pulled pump and discovered freeze-plug line wasn't connected; reconnected that line then reinstalled pump; collar on top of screen made installation difficult. high pH, conductivity and turbidity due to re-installing pump; could not stabilize cond & turb, so did not use as factor

Stabilization Parameters

| | |
|-----------|--------------------------|
| Temp | = +/- 3% in celcius |
| pH | = +/- 0.1 unit |
| SC | = +/- 3% in µmhos/cm |
| ORP/Eh | = +/- 10 millivolts |
| DO | = +/- 10% in mg/L |
| Turbidity | = +/- 10% for values > 5 |

Range values for data entry

| Conductivity Range (mS/cm) | Turbidity (NTU) | Dissolve Oxygen (DO) (mg/L) | Temperature Range (°C) | Ox/Reduc Potential (mV) |
|----------------------------|-----------------|-----------------------------|------------------------|-------------------------|
| Min 0 | Min 0 | Min 0.01 | Min -20 | Min -400 |
| Max 2000 | Max 1000 | Max 2000 | Max 80 | Max 700 |