

**3R - 425**

**2014 AGWMMR**

**04 / 16 / 2015**



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Mr. Glenn von Gonten  
New Mexico Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

April 16, 2015

**Re: NMOCD Case No. 3R-425, 2014 Annual Groundwater Monitoring Report**

Dear Mr. von Gonten:

Enclosed is the 2014 Annual Groundwater Monitoring Report for the San Juan 29-7 Unit 37 site. This report, prepared by Conestoga-Rovers & Associates (CRA), contains the results of groundwater monitoring from March, June, September, and December 2014.

Please let me know if you have any questions.

Sincerely,

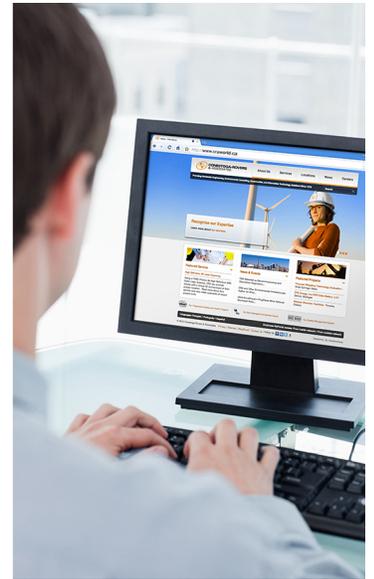
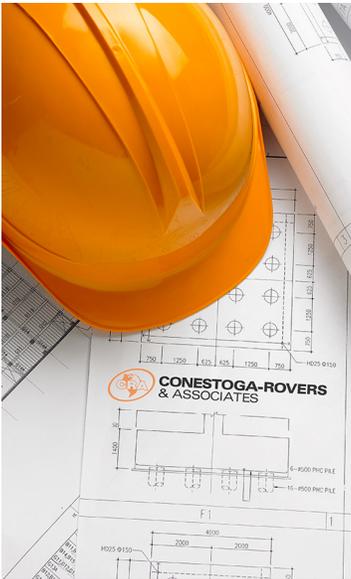
A handwritten signature in black ink that reads "John F. Greiner".

Rick Greiner

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[www.CRAworld.com](http://www.CRAworld.com)



## 2014 Annual Groundwater Monitoring Report

ConocoPhillips San Juan 29-7 Unit 37  
Rio Arriba County, New Mexico  
API# 30-039-07643  
NMOCD# 3R-425

Prepared for: ConocoPhillips Company

### Conestoga-Rovers & Associates

6121 Indian School Road, NE Suite 200  
Albuquerque, New Mexico 87110

February 2015 • 075034 • Report No. 6



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## Section 1.0 Introduction

ConocoPhillips Company (ConocoPhillips) retained Conestoga-Rovers & Associates (CRA) to conduct site characterization and soil and groundwater remediation at the San Juan 29-7 Unit 37 natural gas well (Site). The Site is located within Unit Letter N, Section 12, Township 29N, Range 7W, Rio Arriba County, New Mexico (Latitude: 36.73552° N; Longitude: -107.52488° W) (**Figure 1**). This report summarizes the remediation status and groundwater data that were collected in 2014.

Site characterization activities were conducted at the Site in 2010 and 2011 to delineate soil and groundwater impacted by a release that occurred from an above-ground condensate tank. The site characterization indicated hydrocarbon impacts from the release that exceeded New Mexico Water Quality Control Commission (NMWQCC) standards, including benzene, toluene and total xylenes in groundwater and total benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH) in the vadose zone soil. Soil impacts were delineated in the area of the release to a maximum depth of approximately 110 feet-below ground surface (ft-bgs) or to the top of groundwater. Groundwater was impacted in the immediate area of the release and extended to approximately 60 feet down-gradient from the release. A total of 18 soil borings and eight (8) monitoring wells have been utilized to characterize subsurface soil and groundwater conditions. Soil and groundwater impacts were treated in 2012 with a chemical oxidant at the Site.

### 1.1 Site History

The Site is located on land owned by Mr. Richard Hodgson and the surface is leased by ConocoPhillips. The well is currently operated by Burlington Resources Oil and Gas Company LP, a wholly owned subsidiary of ConocoPhillips. A Site detail map is included as **Figure 2**.

ConocoPhillips discovered a leaking inspection plate gasket on the above-ground condensate tank on August 26, 2010. Approximately 23 barrels (bbls) of condensate were released and fully contained within the berm; however, no liquids were recovered. The release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) with a C-141 Release Notification and Corrective Action form, filed by ConocoPhillips on September 16, 2010.

### 1.2 Site Setting

The Site is located in Rio Arriba County, New Mexico, on privately owned ranch land. The elevation at the Site is approximately 6,292 feet above mean sea level (amsl).

The Tertiary-aged San Jose Formation crops out as sandstone bluffs visible to the north and south of the Site and locally reaching an elevation of approximately 6,652 feet amsl.

Subsurface soils at the Site consist primarily of silts inter-bedded with fine sands and clays. Groundwater is located at approximately 110 ft-bgs and locally flows towards the south-southwest. Regional groundwater flow is unknown, but, likely according to the United States Geological Survey Delgadita Mesa, NM topographic map, if groundwater flow mimics topography, it trends south/southeast.

An Environmental Data Resources (EDR) report on the subject property identified the Gould Pass National Wetland Inventory within a one mile radius of the Site. According to the EDR radius map included in the report, the largest section of the Wetland Inventory is located up-gradient of the Site.

### 1.3 Summary of Previous Investigations

Following the discovery of the release of condensate from the above-ground tank at the site, approximately 5,100 cubic yards (yd<sup>3</sup>) of soil was excavated from the area below the former tank location between September 24, 2010 and January 3, 2011. The excavation measured approximately 70 ft by 120 ft by 30 ft deep (**Figure 2**). The horizontal and vertical extent of the hydrocarbon-impacted area was not determined at that time. For practical and safety reasons and due to limitations posed by surface structures, the southern extent of the excavation and the vertical extent of the excavation were halted at approximately 30 ft-bgs. At completion of the excavation approximately 3,444 yards of hydrocarbon impacted soil had been removed and transported to the Industrial Ecosystems, Incorporated landfarm located in Aztec, New Mexico. The excavation was subsequently back filled with clean soil.

To further delineate vertical impacts of the release, Tetra Tech Inc. sampled subsurface soils in the impacted area and in close proximity to the release point (soil boring B-1) between January 12 and 14, 2011 (Pre-treatment Soil Boring B-1, **Figure 2**). Impacts were noted in the soil above the NMOCD recommended field screening level for organic vapors (100 ppm) from 30 ft-bgs to the total depth of the soil boring at 129.5 ft-bgs. All analytical results for soil samples collected from B-1 were below the recommended NMOCD remediation action levels with the exception of the sample collected from 30 to 32 ft-bgs that had a total BTEX concentration and total TPH concentration which exceed the NMOCD recommended action limits for total BTEX and TPH at 50 mg/kg, and 100 mg/kg, respectively .

Analytical results from the groundwater sample collected from the open borehole, B-1, indicated BTEX in groundwater above the NMWQCC standard.

Between February 28 and March 4, 2011, Tetra Tech advanced two additional soil borings, B-2 and B-3, in or near the center of the previously excavated area (Pre-treatment Soil Boring B-2 and B-3, **(Figure 2)**) and installed four soil borings/monitoring wells (MW-1 through MW-4) at the Site.

Field screening of B-2 soil samples indicated soil impacts above the NMOCD field screening action level of 100 ppm. The total BTEX concentration of 122.5 mg/kg also exceeded the NMOCD action level from 45 to 47 ft-bgs in boring B-2.

Field screening of soil samples collected from B-3 showed no signs of hydrocarbon impacts to a total depth of 57 ft-bgs. No samples were collected for laboratory analysis from B-3 since no hydrocarbon impacts were observed during field screening activities and groundwater was not encountered.

Due to the elevated organic vapors encountered in B-2, monitoring well MW-1 was installed approximately 20 ft south of B-2. The analytical results for this well from the March 2011 groundwater sampling event indicated that only benzene was detected above the NMWQCC standard at a concentration of 0.066 mg/L. Three additional monitoring wells, MW-2, MW-3, and MW-4, were installed at the Site (**Figure 2**). One monitoring well (MW-4) was installed up-gradient of the release and two monitoring wells (MW-2 and MW-3) were installed down-gradient of the release. None of these monitoring wells showed any detection of hydrocarbon constituents above the NMWQCC groundwater quality standards.

To further evaluate Site conditions and to delineate areas of remediation, 11 borings were advanced and four monitoring wells were installed by CRA at the Site from September 2011 to October 2011 (**Figure 2**). Monitoring wells were installed within the release area, MW-1 and MW-8, up-gradient of the release area, MW-4 and MW-7, and MW-2, MW-3, MW-5 and MW-6 down-gradient of the area.

Field screening of soil samples and laboratory results indicated impacts (organic vapors > 100 ppm) in the immediate area of the release to depths ranging from 40 ft-bgs to 110 ft-bgs. Soil analytical results indicated Total BTEX and TPH above the NMOCD recommended action levels in four of the borings, B-4, B-5/MW-8, and B-8, which are located within the excavation area and one boring, B-10, located approximately 10 feet south of the excavation. In addition, soil boring B-6/MW-6 located approximately 60 feet southeast of the excavation indicated the TPH concentration above the NMOCD recommended action limit.

During this portion of the Site characterization, groundwater was encountered at approximately 110 ft-bgs, which is consistent with groundwater levels encountered during previous phases of the site characterization. The groundwater flow direction was determined to be towards the south-southwest. The analytical results for groundwater indicated that the benzene concentrations exceeded the NMWQCC standard at three locations (MW-1, MW-6 and MW-8). Toluene and total xylenes concentrations exceeded the standards at one location (MW-8).

For in-situ site remediation activities, CRA retained DeepEarth Technologies, Inc. (DTI) to implement the *Cool-Ox*<sup>™</sup> Technology, a patented in-situ process that uses a solution of calcium peroxide that generates a slow release of hydrogen peroxide and facilitates the oxidation of petroleum hydrocarbons.

From December 2011 to February 2012, the *Cool-Ox*<sup>™</sup> solution was injected in the area shown in **Figure 2**. DTI utilized a direct push technology (DPT) drill rig supported by DTI's mixing and injection trailer (the Deep-Shot-Rig<sup>™</sup>) to advance temporary 1.5-inch diameter injection points.

Approximately 52,889 gallons were used to inject the solution into the subsurface soil and groundwater using 93 injection points on 8-foot spacings in an approximate area of 5,950 ft<sup>2</sup> (70 ft x 85 ft) to treat approximately 8,815 yd<sup>3</sup> of impacted soil. The solution was primarily injected into the subsurface from the bottom of the injection point to approximately 30 ft-bgs. In addition to groundwater treatment using the direct-push rig, the solution was directly injected into groundwater monitoring wells MW-1, MW-6, MW-7 and MW-8 with approximately 8,000 gallons of solution.

To evaluate the effectiveness of the *Cool-Ox*<sup>™</sup> treatment, subsurface soil and groundwater conditions were analyzed at the Site after the treatment. Groundwater samples were collected and analyzed on a quarterly basis (February 2012, June 2012, September 2012 and January 2013). The subsurface soil was sampled in the area of the *Cool-Ox*<sup>™</sup> treatment by advancing five (5) soil borings in August 2012.

A more thorough discussion of the *Cool-Ox*<sup>™</sup> treatment site activities can be found in the April 2013 CRA *Subsurface Remediation and Annual Groundwater Monitoring Report*.

## Section 2.0 Groundwater Monitoring Summary

Groundwater sampling events were conducted at the Site on March 18, June 16, September 16 and 25, and December 16, 2014. Prior to collection of groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R, depth to groundwater in each well was measured using an oil/water interface probe. Groundwater elevations are detailed in **Table 1**. Groundwater potentiometric surface maps from 2014 data are presented as **Figures 3, 4, 5, and 6**, respectively. The groundwater potentiometric surface elevations have been consistent with little variability by season and throughout the history of monitoring the wells at the Site. Generally, groundwater was encountered across the Site at approximately 108 feet bgs.

For all of these monitoring periods, the groundwater flow at the site was towards the south-southwest and the average groundwater gradient across the Site was 0.014 feet per foot, consistent with historical results.

A supplemental groundwater sample was collected from well MW-8R in September 2014. A one-gallon sample was sent to CRA's Innovative Technology Group (ITG) in Niagara Falls, NY, for the purpose of conducting a laboratory treatability study to address recalcitrant BTEX compounds and dissolved metals in groundwater. In situ chemical oxidation was proposed to treat the metals and reduce BTEX concentrations. The results of the treatability study are discussed below in Section 3.

### 2.1 Groundwater Monitoring Methodology

During monitoring events, at least three well volumes were purged from Site monitoring wells with a Monsoon™ submersible pump or a dedicated, polyethylene, 1.5-inch disposable bailer prior to sampling. Purge water generated during purging of Site monitoring wells was placed in the on-Site produced water tank. While purging each well, groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential were collected using a multi-parameter sonde. Field parameters are summarized on **Table 2**. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services, Inc. of Lenexa, KS.

Groundwater samples were analyzed for the presence of BTEX by EPA method 8260, dissolved manganese and selenium by EPA method 6010, nitrate (as nitrogen) by EPA method 353.2, sulfate by EPA method 300.0, and total dissolved solids (TDS) by method SM 2540C. A summary of analytical results is presented in **Table 3**. Completed groundwater laboratory analytical results are presented in **Appendix A**.

## 2.2 Groundwater Monitoring Analytical Results

The NMWQCC mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use.

A groundwater hydrocarbon concentration map and a groundwater inorganic concentration map are included as **Figures 7** and **8**, respectively. Groundwater analytical results are discussed below.

### March 2014

- **BTEX:** The NMWQCC domestic water supply groundwater quality standards for benzene, toluene, ethylbenzene, and xylene are 0.01 mg/L, 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively. Monitoring well MW-8R exceeded the standard for benzene with an analytical result of 0.103 mg/L.
- **Dissolved Manganese:** The NMWQCC domestic water supply groundwater quality standard for dissolved manganese is 0.2 mg/L. Monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, and MW-7 exceeded this standard with analytical results of 0.643 mg/L, 0.281 mg/L, 1.81 mg/L, 0.606 mg/L, 0.246 mg/L, and 0.438 mg/L respectively.
- **Dissolved Selenium:** The NMWQCC domestic water supply groundwater quality standard for dissolved selenium is 0.05 mg/L. Monitoring well MW-2 exceeded this standard with an analytical result of 0.08 mg/L.
- **Nitrate (as Nitrogen):** The NMWQCC domestic water supply groundwater quality standard for nitrate is 10 mg/L. Monitoring wells MW-1, MW-2, MW-6 and MW-7 exceeded this standard with analytical results of 20.1 mg/L, 40.2 mg/L, 23.6 mg/L, and 35.0 mg/L, respectively.
- **Sulfate:** The NMWQCC domestic water supply groundwater quality standard for sulfate is 600 mg/L. Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded this standard with analytical results of 1,170 mg/L, 1,320 mg/L, 1,150 mg/L, 1,280 mg/L, 1,760 mg/L, 1,000 mg/L, 1,920 mg/L, and 1,290 mg/L, respectively.

- **TDS:** The NMWQCC domestic water supply groundwater quality standard for TDS is 1,000 mg/L. Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8R exceeded this standard with analytical results of 2,270 mg/L, 2,580 mg/L, 2,050 mg/L, 2,180 mg/L, 2,800 mg/L, 2,000 mg/L, 3,350 mg/L, and 2,460 mg/L, respectively.

### **June 2014**

- **BTEX:** Monitoring well MW-8R exceeded the standard for benzene with an analytical result of 0.319 mg/L.
- **Dissolved Manganese:** Monitoring wells MW-1, MW-3, MW-5, MW-7, and MW-8R exceeded the standard with analytical results of 1.2 mg/L, 2.0 mg/L, 0.93 mg/L, 0.49 mg/L, and 1.5 mg/L, respectively.
- **Dissolved Selenium:** Monitoring well MW-2 exceeded the standard with an analytical result of 0.073 mg/L.
- **Nitrate (as Nitrogen):** Monitoring well MW-2 exceeded the standard with an analytical result of 22.2 mg/L.
- **Sulfate:** Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,380 mg/L, 1,280 mg/L, 1,130 mg/L, 1,240 mg/L, 1,730 mg/L, 955 mg/L, 1,930 mg/L, and 1,510 mg/L, respectively.
- **TDS:** Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8R exceeded this standard with analytical results of 2,300 mg/L, 2,360 mg/L, 1,190 mg/L, 1,950 mg/L, 2,320 mg/L, 1,780 mg/L, 2,940 mg/L, and 2,330 mg/L, respectively.

### **September 2014**

- **BTEX:** Monitoring well MW-8R exceeded the standard for benzene with an analytical result of 0.172 mg/L.

- **Dissolved Manganese:** Monitoring wells MW-1, MW-2, MW-3, MW-5, MW-7, and MW-8R exceeded the standard with analytical results of 1.57 mg/L, 0.783 mg/L, 2.29 mg/L, 0.433 mg/L, 0.231 mg/L, and 1.38 mg/L, respectively.
- **Dissolved Selenium:** Monitoring well MW-2 exceeded the standard with an analytical result of 0.0734 mg/L.
- **Nitrate (as Nitrogen):** Monitoring wells MW-2, MW-3, MW-6, and MW-7 exceeded the standard with analytical results of 34.0 mg/L, 11.3 mg/L, 23.2 mg/L, and 29.7 mg/L, respectively.
- **Sulfate:** Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,690 mg/L, 1,140 mg/L, 1,060 mg/L, 1,260 mg/L, 1,490 mg/L, 846 mg/L, 1,970 mg/L, and 1,530 mg/L, respectively.
- **TDS:** Monitoring wells MW-2, MW-3, MW-5, and MW-6 exceeded this standard with analytical results of 2,440 mg/L, 2,240 mg/L, 2,850 mg/L, 1,930 mg/L, respectively. Monitoring wells MW-1, MW-4, MW-7, and MW-8R were not sampled for TDS during this quarter.

#### **December 2014**

- **BTEX:** Monitoring well MW-8R exceeded the standard for benzene with an analytical result of 0.187 mg/L.
- **Dissolved Manganese:** Monitoring wells MW-1, MW-2, MW-3, MW-7, and MW-8R exceeded the standard with analytical results of 1.49 mg/L, 0.749 mg/L, 2.06 mg/L, 0.435 mg/L, and 1.01 mg/L, respectively.
- **Dissolved Selenium:** Monitoring well MW-2 exceeded the standard with an analytical result of 0.0715 mg/L.
- **Nitrate (as Nitrogen):** Monitoring wells MW-2, MW-6, and MW-8R exceeded the standard with analytical results of 31.0 mg/L, 27.2 mg/L, and 13.0 mg/L, respectively.

- **Sulfate:** Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,580 mg/L, 1,380 mg/L, 1,210 mg/L, 1,330 mg/L, 1,790 mg/L, 1,000 mg/L, 2,140 mg/L, and 1,470 mg/L, respectively.
- **TDS:** Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8R exceeded this standard with analytical results of 2,410 mg/L, 2,360 mg/L, 2,110 mg/L, 2,250 mg/L, 2,710 mg/L, 1,830 mg/L, 2,610 mg/L, and 2,440 mg/L, respectively.

### Section 3.0 Conclusions and Recommendations

The groundwater samples collected prior to subsurface treatment with *Cool-Ox*<sup>™</sup> showed detections of benzene, toluene and xylenes above the NMWQCC standards at monitoring wells MW-1, MW-6 and MW-8. The *Cool-Ox*<sup>™</sup> treatment has evidently attenuated the BTEX concentrations previously detected in groundwater of monitoring wells MW-1 and MW-6.

Post-treatment groundwater sample results from MW-8, however, indicated concentrations of benzene, toluene and xylenes above the NMWQCC standards. Samples collected from replacement monitoring well MW-8R show concentrations of benzene and xylenes again above NMWQCC standards for these constituents.

A treatability study of site groundwater was conducted to assess the effectiveness of ISCO as a treatment to reduce BTEX and for the precipitation of iron and manganese from groundwater. The study evaluated several oxidizing agents including potassium permanganate, Fenton's Reagent (hydrogen peroxide in a solution of ferrous salts) and catalyzed sodium persulfate. The study concluded that treatment with Fenton's Reagent would be the most effective ISCO treatment for the Site.

CRA recommends a Site-specific conceptual design be completed to implement ISCO using Fenton's Reagent. CRA will submit a separate work plan detailing proposed ISCO activities for NMOCD approval.

Monitoring well MW-4 is located up-gradient of the hydrocarbon release area, therefore groundwater samples from this well can be considered to represent background conditions. Sulfate and TDS concentrations in groundwater samples collected from this well consistently exceed NMWQCC standards. Sulfate and TDS concentrations in down-gradient monitoring wells are within the same order of magnitude as the background concentrations.

Monitoring wells MW-1, MW-4 and MW-7, up-gradient from MW-8R, have displayed 8 consecutive quarters of BTEX concentrations below the NMWQCC standards and therefore these constituents will not continue to be analyzed in groundwater samples from these wells. Groundwater samples will be collected from all Site monitoring wells and analyzed for BTEX (except as noted), dissolved manganese and selenium, sulfate, nitrate, and TDS.

CRA will continue to monitor groundwater at the Site on a quarterly basis until BTEX and inorganic constituents are below NMWQCC standards for eight consecutive quarters or background concentrations have been reached.

The next groundwater monitoring event is scheduled for March 2015.

## Figures

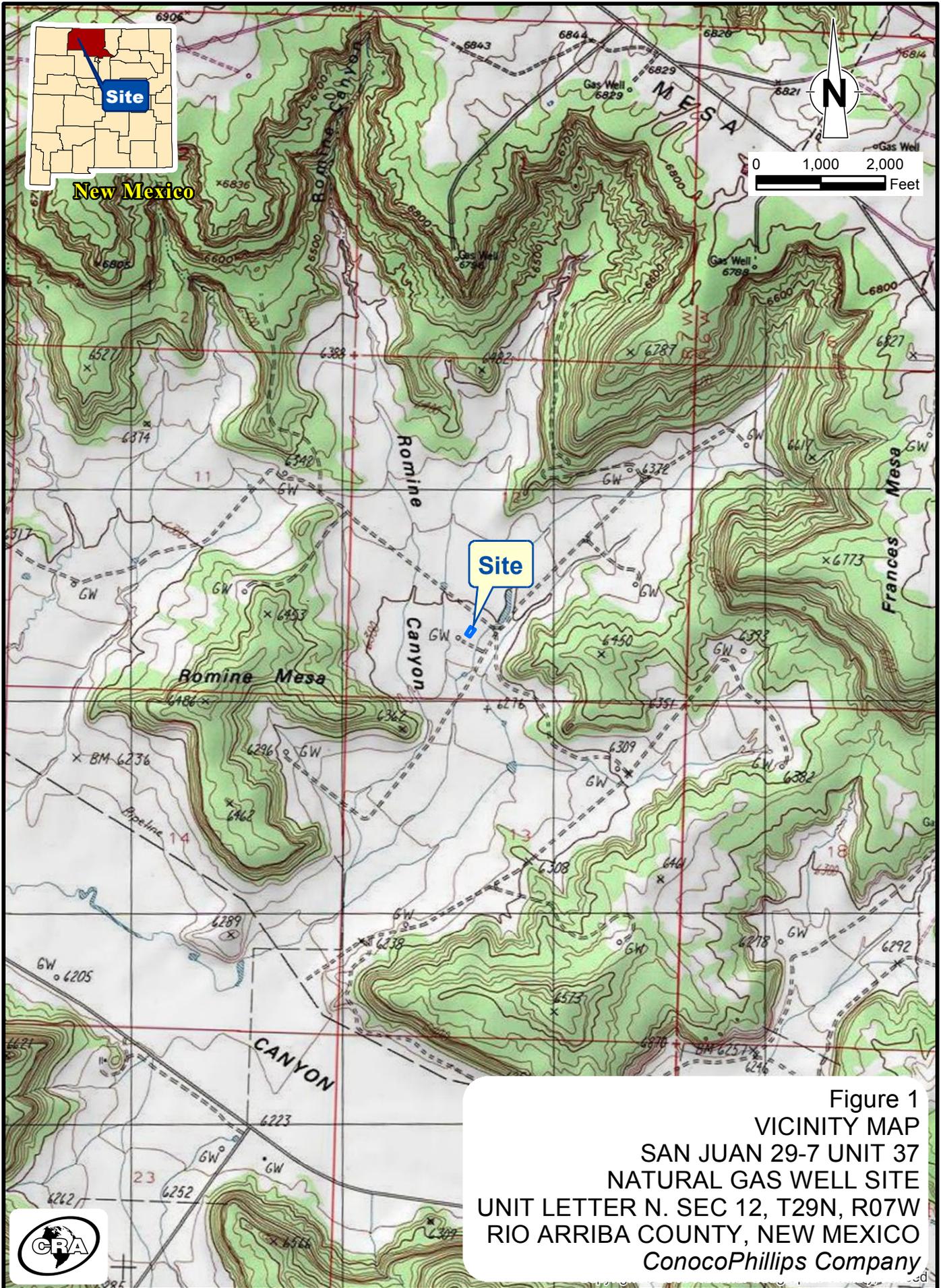
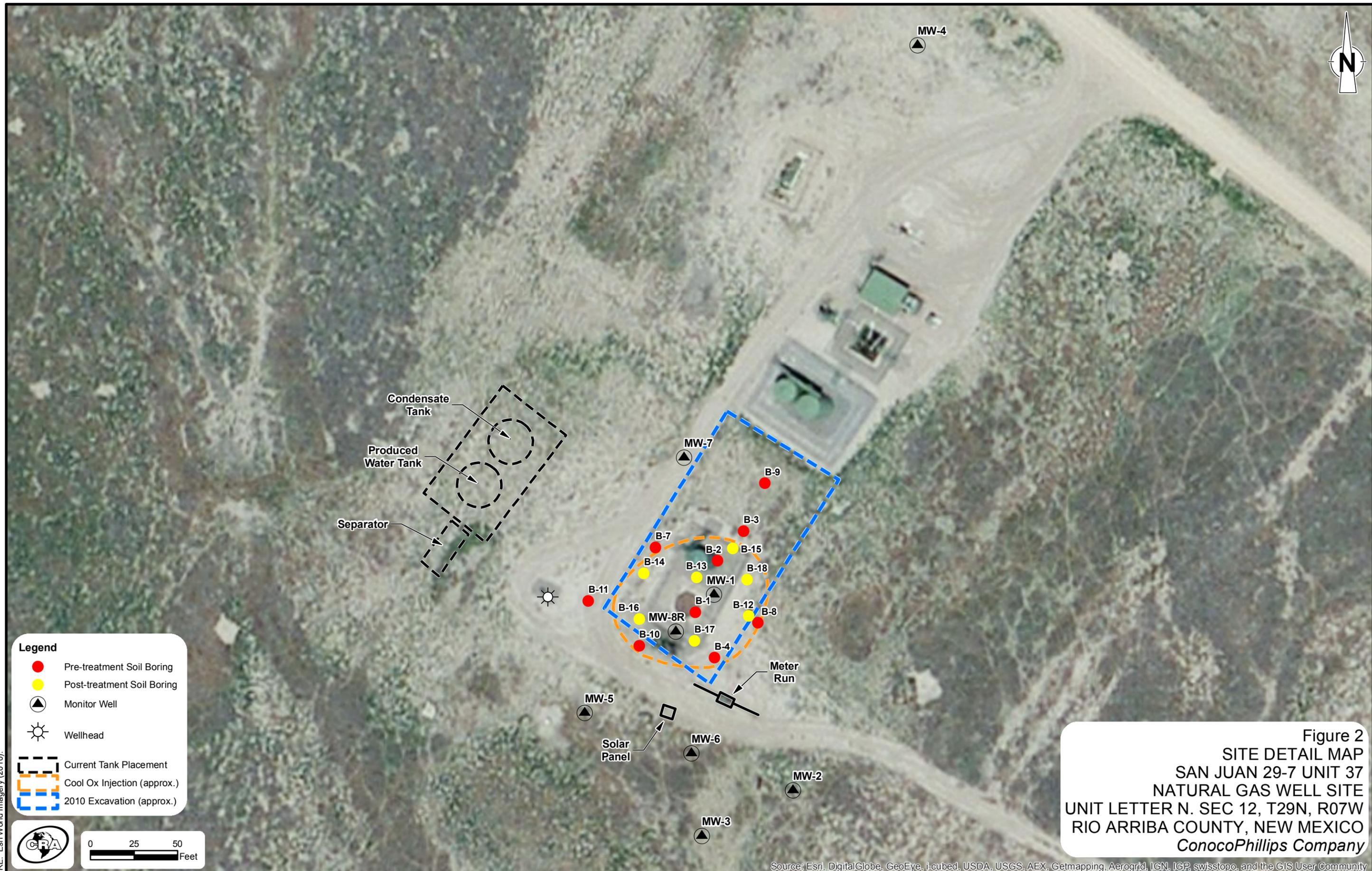


Figure 1  
 VICINITY MAP  
 SAN JUAN 29-7 UNIT 37  
 NATURAL GAS WELL SITE  
 UNIT LETTER N. SEC 12, T29N, R07W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 ConocoPhillips Company

RE: USGS 7.5 Minute Topographic Maps.





- Legend**
- Pre-treatment Soil Boring
  - Post-treatment Soil Boring
  - ▲ Monitor Well
  - ☀ Wellhead
  - ▭ Current Tank Placement
  - ▭ Cool Ox Injection (approx.)
  - ▭ 2010 Excavation (approx.)

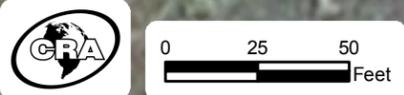


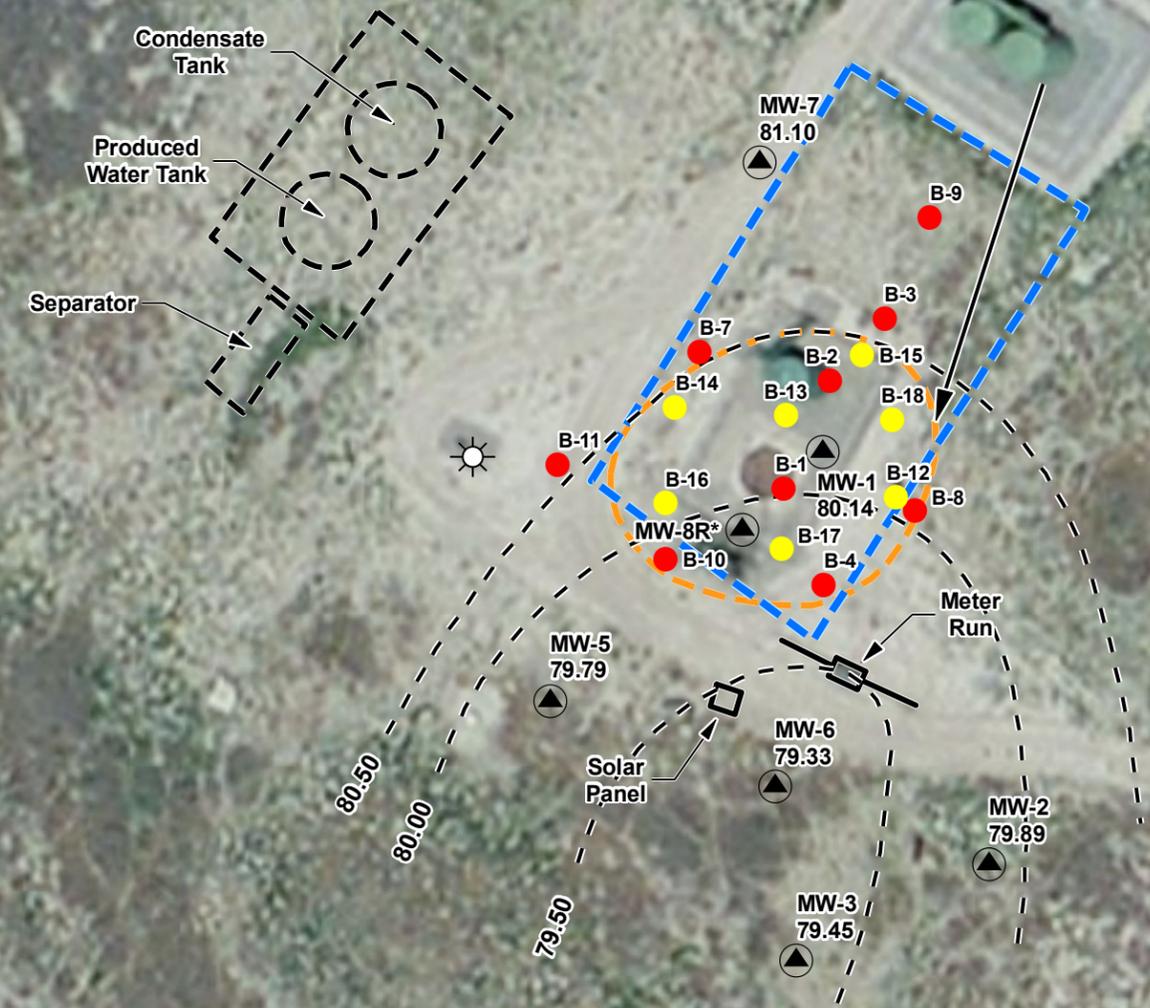
Figure 2  
SITE DETAIL MAP  
SAN JUAN 29-7 UNIT 37  
NATURAL GAS WELL SITE  
UNIT LETTER N. SEC 12, T29N, R07W  
RIO ARRIBA COUNTY, NEW MEXICO  
ConocoPhillips Company

RE: Esri World Imagery (2010).

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



MW-4  
86.00



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- Monitor Well
- Wellhead
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Current Tank Placement
- Cool Ox Injection (approx.)
- 2010 Excavation (approx.)

Note: \* = No survey data available

**Figure 3**  
**MARCH 2014**  
**GROUNDWATER POTENTIOMETRIC SURFACE MAP**  
**SAN JUAN 29-7 UNIT 37**  
**NATURAL GAS WELL SITE**  
**UNIT LETTER N. SEC 12, T29N, R07W**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**ConocoPhillips Company**

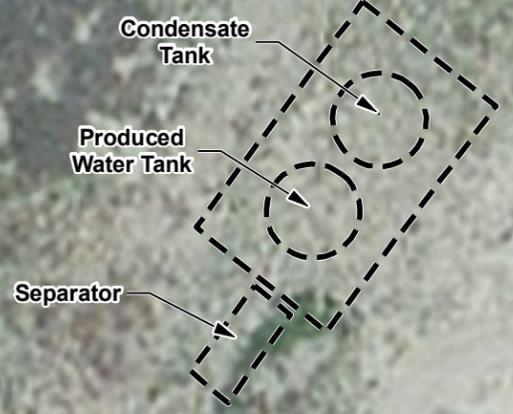
RE: Esri World Imagery (2010)

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Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



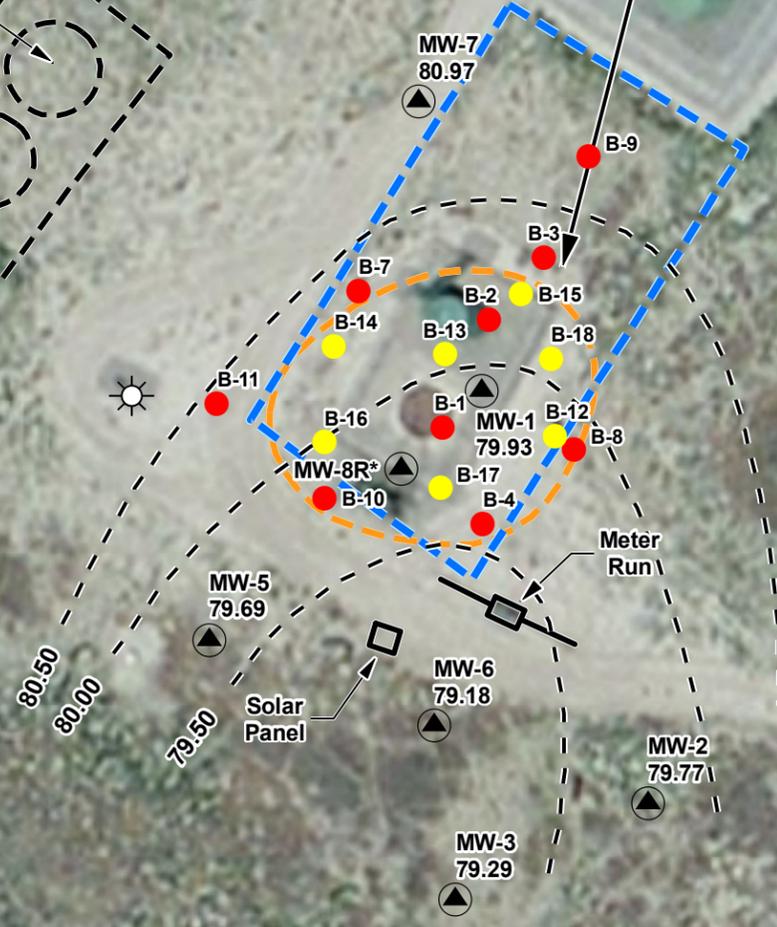
MW-4  
85.92



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- Monitor Well
- Wellhead
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Current Tank Placement
- Cool Ox Injection (approx.)
- 2010 Excavation (approx.)

Note: \* = No survey data available



**Figure 4**  
**JUNE 2014**  
**GROUNDWATER POTENTIOMETRIC SURFACE MAP**  
**SAN JUAN 29-7 UNIT 37**  
**NATURAL GAS WELL SITE**  
**UNIT LETTER N. SEC 12, T29N, R07W**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**ConocoPhillips Company**

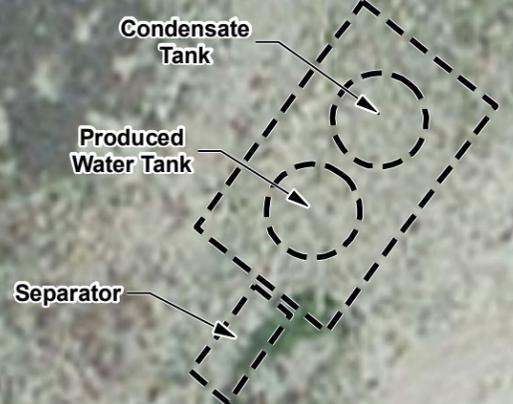
RE: Esri World Imagery (2010).

0 25 50 Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



MW-4  
85.83



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- Monitor Well
- Wellhead
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Current Tank Placement
- Cool Ox Injection (approx.)
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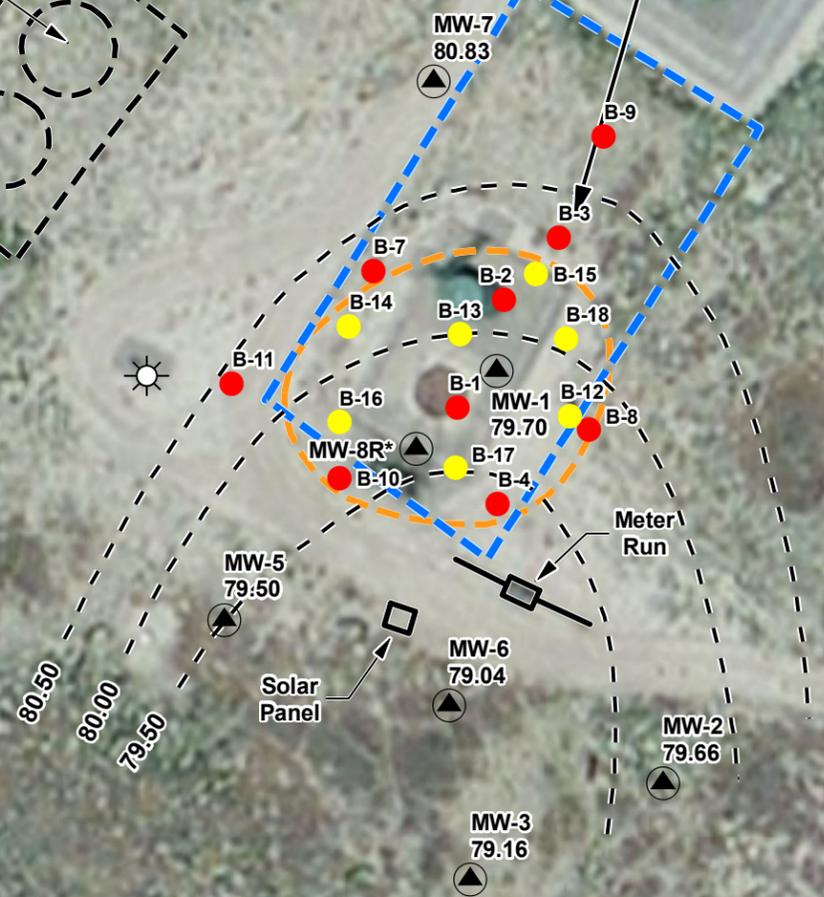


Figure 5  
 SEPTEMBER 2014  
 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
 SAN JUAN 29-7 UNIT 37  
 NATURAL GAS WELL SITE  
 UNIT LETTER N. SEC 12, T29N, R07W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 ConocoPhillips Company

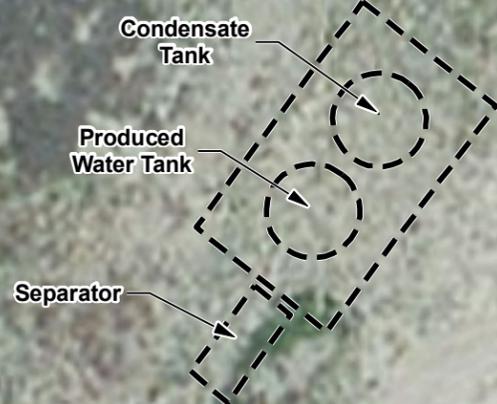
RE: Esri World Imagery (2010)

0 25 50 Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



MW-4  
85.80



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- Monitor Well
- Wellhead
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Current Tank Placement
- Cool Ox Injection (approx.)
- 2010 Excavation (approx.)

Note: \* = No survey data available

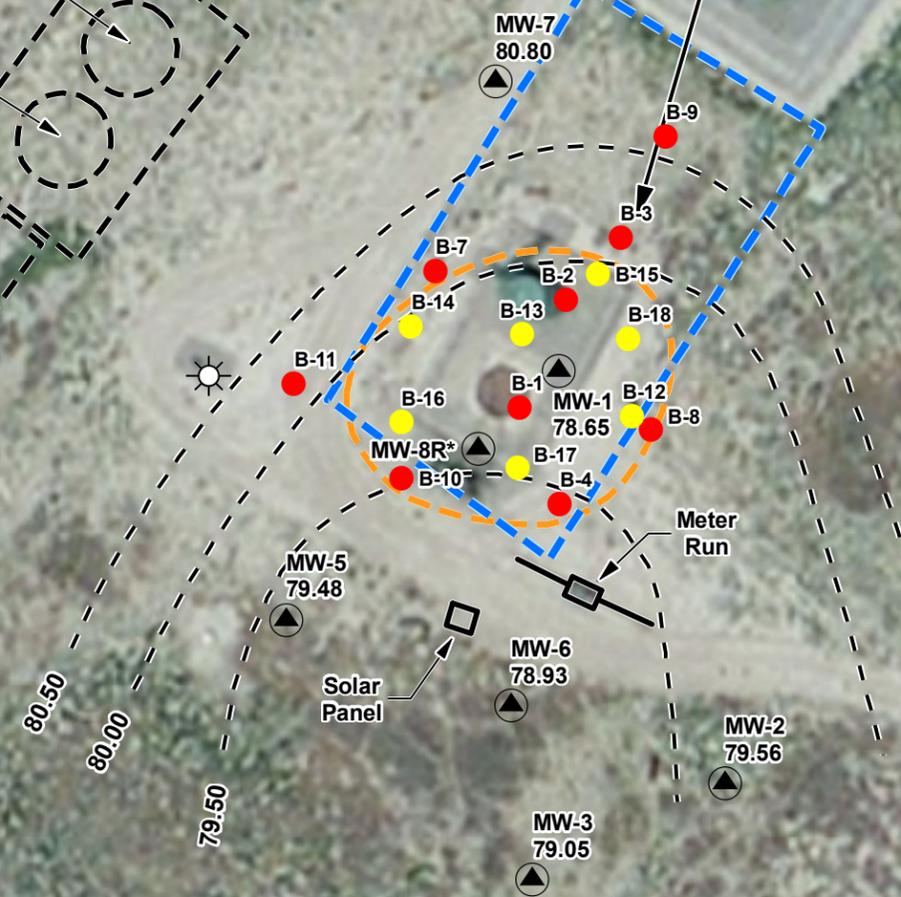


Figure 6  
 DECEMBER 2014  
 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
 SAN JUAN 29-7 UNIT 37  
 NATURAL GAS WELL SITE  
 UNIT LETTER N. SEC 12, T29N, R07W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 ConocoPhillips Company

RE: Esri World Imagery (2010).

0 25 50 Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Notes:  
 1) Analytical results reported in mg/L.  
 2) Bold notation indicates a level that exceeds the New Mexico Water Quality Control Commission standard.  
 3) NA = not analyzed



MW-7				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Benzene	<0.001	NA	<0.001	0.0013
Toluene	<0.001	NA	<0.001	0.0031
Ethylbenzene	<0.001	NA	<0.001	<0.001
Xylenes	<0.003	NA	<0.003	<0.003

MW-4				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Benzene	<0.001	NA	<0.001	<0.001
Toluene	<0.001	NA	<0.001	<0.001
Ethylbenzene	<0.001	NA	<0.001	<0.001
Xylenes	<0.003	NA	<0.003	<0.003

MW-8R				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Benzene	<b>0.103</b>	<b>0.319</b>	<b>0.172</b>	0.187
Toluene	0.154	<b>0.846</b>	0.0022	0.301
Ethylbenzene	0.0076	0.0305	<0.001	0.0248
Xylenes	0.164	0.505	0.0067	0.368

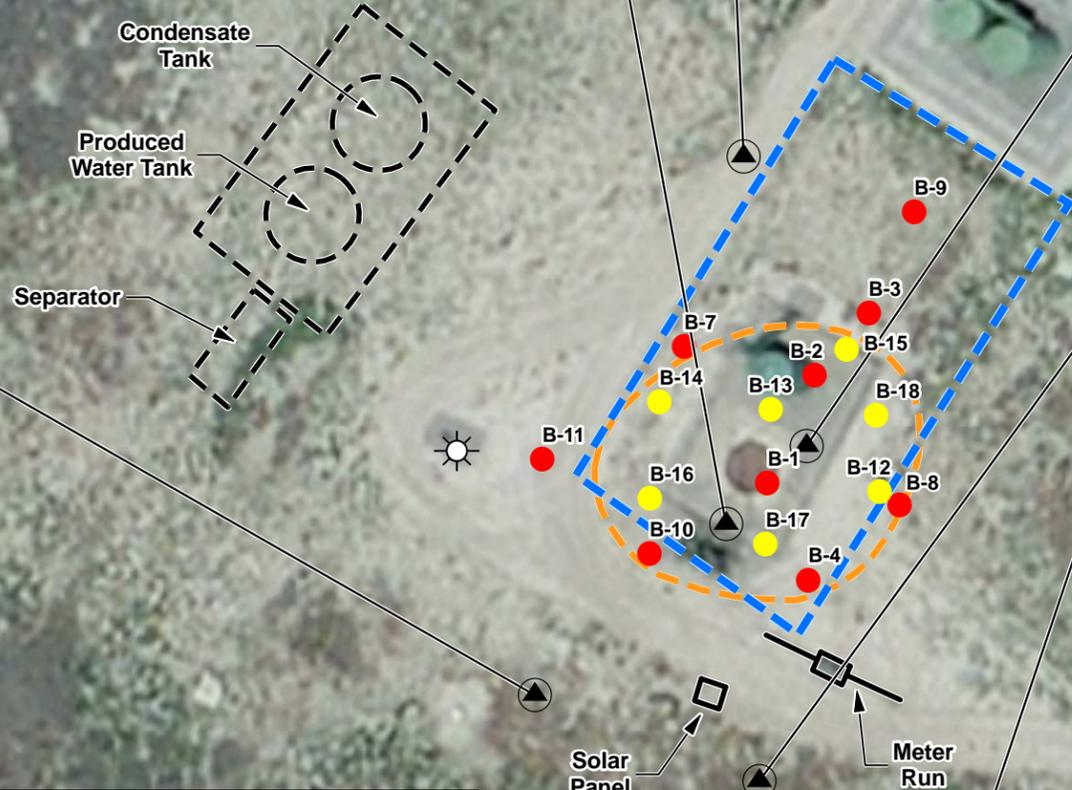
MW-1				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Benzene	0.0036	NA	<0.001	<0.001
Toluene	<0.001	NA	<0.001	<0.001
Ethylbenzene	<0.001	NA	<0.001	<0.001
Xylenes	<0.003	NA	<0.003	<0.003

MW-6				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Benzene	0.0012	<0.001	<0.001	0.0014
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylenes	<0.003	<0.003	<0.003	<0.003

MW-5				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylenes	<0.003	<0.003	<0.003	<0.003

MW-2				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylenes	<0.003	<0.003	<0.003	<0.003

MW-3				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylenes	<0.003	<0.003	<0.003	<0.003



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- ▲ Monitor Well
- ☀ Wellhead
- Current Tank Placement
- Cool Ox Injection (approx.)
- 2010 Excavation (approx.)

**Figure 7**  
**GROUNDWATER HYDROCARBON ANALYTICAL RESULTS MAP**  
 SAN JUAN 29-7 UNIT 37  
 NATURAL GAS WELL SITE  
 UNIT LETTER N. SEC 12, T29N, R07W  
 RIO ARRIBA COUNTY, NEW MEXICO  
*ConocoPhillips Company*

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

RE: Esri World Imagery (2010).

Notes:  
 1) Analytical results reported in mg/L.  
 2) Bold notation indicates a level that exceeds the New Mexico Water Quality Control Commission standard.  
 3) NA = not analyzed



MW-7				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Manganese	<b>0.438</b>	<b>0.490</b>	<b>0.231</b>	<b>0.435</b>
Selenium	<0.015	<0.015	<0.015	<0.015
Nitrate	<b>35</b>	2.7	<b>29.7</b>	3.9
Sulfate	<b>1920</b>	<b>1930</b>	<b>1970</b>	<b>2140</b>
TDS	<b>3350</b>	<b>2940</b>	NA	<b>2610</b>

MW-4				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Manganese	0.0227	0.0080	0.0160	0.0155
Selenium	0.0410	0.0340	0.0335	0.0314
Nitrate	8.2	6.5	7.0	6.8
Sulfate	<b>1280</b>	<b>1240</b>	<b>1260</b>	<b>1330</b>
TDS	<b>2180</b>	<b>1950</b>	NA	<b>2250</b>

MW-8R				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Manganese	0.106	<b>1.5</b>	<b>1.38</b>	<b>1.01</b>
Selenium	<0.015	<0.015	<0.015	<0.015
Nitrate	<b>35.0</b>	4.4	6.6	<b>13.0</b>
Sulfate	<b>1290</b>	<b>1510</b>	<b>1530</b>	<b>1470</b>
TDS	<b>2460</b>	<b>2330</b>	NA	<b>2440</b>

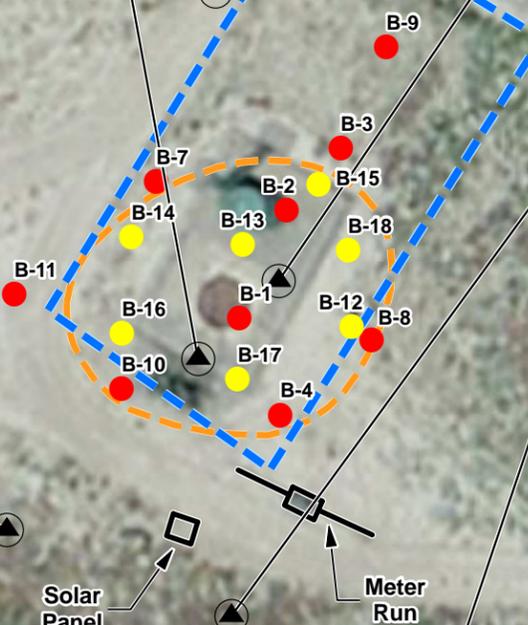
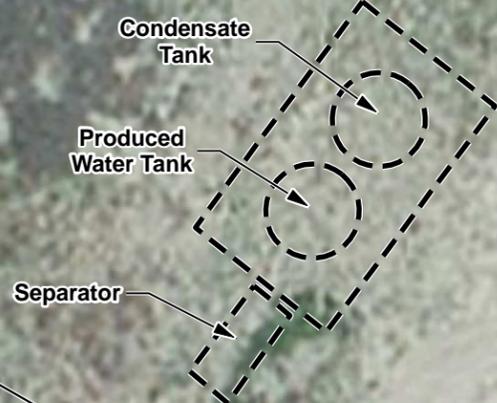
MW-1				
Date	3/18/2014	6/16/2014	9/25/2014	12/16/2014
Manganese	<b>0.643</b>	<b>1.20</b>	<b>1.57</b>	<b>1.49</b>
Selenium	<0.015	<0.015	<0.015	<0.015
Nitrate	<b>20.1</b>	5.7	4.4	2.9
Sulfate	<b>1170</b>	<b>1380</b>	<b>1690</b>	<b>1580</b>
TDS	<b>2270</b>	<b>2300</b>	NA	<b>2410</b>

MW-6				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Manganese	<b>0.246</b>	0.140	0.115	0.147
Selenium	0.0392	0.0360	0.0386	0.0343
Nitrate	<b>23.6</b>	4.6	<b>23.2</b>	<b>27.2</b>
Sulfate	<b>1000</b>	<b>955</b>	<b>846</b>	<b>1000</b>
TDS	<b>2000</b>	<b>1780</b>	<b>1930</b>	<b>1830</b>

MW-5				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Manganese	<b>0.606</b>	<b>0.930</b>	<b>0.433</b>	0.0706
Selenium	<0.015	<0.015	<0.015	<0.015
Nitrate	<0.10	0.17	0.14	0.13
Sulfate	<b>1760</b>	<b>1730</b>	<b>1490</b>	<b>1790</b>
TDS	<b>2800</b>	<b>2320</b>	<b>2850</b>	<b>2710</b>

MW-2				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Manganese	<b>0.281</b>	0.090	<b>0.783</b>	<b>0.746</b>
Selenium	<b>0.080</b>	<b>0.073</b>	<b>0.073</b>	<b>0.0715</b>
Nitrate	<b>40.2</b>	<b>22.2</b>	<b>34.0</b>	<b>31.0</b>
Sulfate	<b>1320</b>	<b>1280</b>	<b>1140</b>	<b>1380</b>
TDS	<b>2580</b>	<b>2360</b>	<b>2440</b>	<b>2360</b>

MW-3				
Date	3/18/2014	6/16/2014	9/16/2014	12/16/2014
Manganese	<b>1.81</b>	<b>2.00</b>	<b>2.29</b>	<b>2.06</b>
Selenium	<0.015	0.024	0.0261	<0.015
Nitrate	0.11	8.8	<b>11.3</b>	6.1
Sulfate	<b>1150</b>	<b>1130</b>	<b>1060</b>	<b>1210</b>
TDS	<b>2050</b>	<b>1190</b>	<b>2240</b>	<b>2110</b>



**Legend**

- Pre-treatment Soil Boring
- Post-treatment Soil Boring
- ▲ Monitor Well
- ☀ Wellhead
- Current Tank Placement
- Cool Ox Injection (approx.)
- 2010 Excavation (approx.)

**Figure 8**  
**GROUNDWATER INORGANIC ANALYTICAL RESULTS MAP**  
 SAN JUAN 29-7 UNIT 37  
 NATURAL GAS WELL SITE  
 UNIT LETTER N. SEC 12, T29N, R07W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 ConocoPhillips Company

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

## Tables

**TABLE 1**

**MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARriba COUNTY, NEW MEXICO**

<i>Well ID</i>	<i>*TOC Elevation (ft)</i>	<i>Date Measured</i>	<i>Depth to Groundwater (ft-below TOC)</i>	<i>Groundwater Elevation (ft)</i>
MW-1	189.24	3/17/2011	108.91	80.33
		8/17/2011	108.81	80.43
		10/18/2011	108.87	80.37
		2/23/2012	108.74	80.50
		6/5/2012	108.75	80.49
		9/18/2012	108.68	80.56
		1/8/2013	108.62	80.62
		3/26/2013	108.69	80.55
		6/11/2013	108.81	80.43
		9/10/2013	109.04	80.2
		1/7/2014	109.26	79.98
		3/18/2014	109.10	80.14
		6/16/2014	109.31	79.93
		9/25/2014	109.54	79.70
12/16/2014	109.59	79.65		
MW-2	189.6	3/17/2011	109.20	80.40
		8/17/2011	109.10	80.50
		10/18/2011	109.13	80.47
		2/23/2012	109.05	80.55
		6/5/2012	109.10	80.50
		9/18/2012	109.28	80.32
		1/8/2013	109.07	80.53
		3/26/2013	109.12	80.48
		6/11/2013	109.32	80.28
		9/10/2013	109.32	80.28
		1/7/2014	109.71	79.89
		3/18/2014	109.71	79.89
		6/16/2014	109.83	79.77
		9/16/2014	109.94	79.66
12/16/2014	110.04	79.56		

**TABLE 1**

**MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARRIBA COUNTY, NEW MEXICO**

MW-3	189.13	3/17/2011	109.42	79.71
		8/17/2011	109.35	79.78
		10/18/2011	109.37	79.76
		2/23/2012	109.26	79.87
		6/5/2012	109.28	79.85
		9/18/2012	109.3	79.83
		1/8/2013	109.28	79.85
		3/26/2013	109.33	79.80
		6/11/2013	109.41	79.72
		9/10/2013	109.58	79.55
		1/7/2014	109.7	79.43
		3/18/2014	109.68	79.45
		6/16/2014	109.84	79.29
		9/16/2014	109.97	79.16
12/16/2014	110.08	79.05		
MW-4	197.6	3/17/2011	111.11	86.49
		8/17/2011	111.10	86.50
		10/18/2011	111.16	86.44
		2/23/2012	111.14	86.46
		6/5/2012	111.20	86.40
		9/18/2012	111.12	86.48
		1/8/2013	111.14	86.46
		3/26/2013	111.23	86.37
		6/11/2013	111.41	86.19
		9/10/2013	111.47	86.13
		1/7/2014	111.66	85.94
		3/18/2014	111.60	86.00
		6/16/2014	111.68	85.92
		9/25/2014	111.77	85.83
12/16/2014	111.80	85.80		
MW-5	188.7	10/18/2011	118.05	70.65
		2/23/2012	108.44	80.26
		6/5/2012	108.38	80.32
		9/18/2012	108.11	80.59
		1/8/2013	108.36	80.34
		3/26/2013	108.72	79.98
		6/11/2013	108.56	80.14
		9/10/2013	108.77	79.93
		1/7/2014	108.91	79.79
		3/18/2014	108.91	79.79
		6/16/2014	109.01	79.69
		9/16/2014	109.2	79.5
12/16/2014	109.22	79.48		

**TABLE 1**

**MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARRIBA COUNTY, NEW MEXICO**

MW-6	188.03	10/18/2011	109.55	78.48
		2/23/2012	108.01	80.02
		6/5/2012	108.05	79.98
		9/18/2012	108.06	79.97
		1/8/2013	108.07	79.96
		3/26/2013	108.09	79.94
		6/11/2013	108.25	79.78
		9/10/2013	108.43	79.6
		1/7/2014	108.70	79.33
		3/18/2014	108.70	79.33
		6/16/2014	108.85	79.18
		9/16/2014	108.99	79.04
		12/16/2014	109.10	78.93
MW-7	189.93	10/18/2011	119.70	70.23
		2/23/2012	106.58	83.35
		6/5/2012	107.95	81.98
		9/18/2012	108.1	81.83
		1/8/2013	108.13	81.8
		3/26/2013	108.24	81.69
		6/11/2013	108.45	81.48
		9/10/2013	108.64	81.29
		1/7/2014	108.80	81.13
		3/18/2014	108.83	81.10
		6/16/2014	108.96	80.97
		9/25/2014	109.1	80.83
		12/16/2014	109.13	80.80
MW-8	189.86	10/19/2011	--	--
		2/23/2012	108.71	81.15
		6/5/2012	108.65	81.21
		9/20/2012	108.64	81.22
		1/8/2013	108.56	81.30
		3/26/2013	108.63	81.23
		6/11/2013	108.85	81.01
7/13/2013	--	--		
MW-8R	--	9/10/2013	108.39	--
		1/7/2014	108.65	--
		3/18/2014	108.62	--
		6/16/2014	108.77	--
		9/25/2014	108.91	--
12/16/2014	108.95	--		

Notes:

ft = Feet

TOC = Top of Casing

\* = Elevation relative to an arbitrary 200 feet

TABLE 2

FIELD PARAMETERS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)	
MW-1	3/17/2014	16.35	7.78	2.050	3155	1.28	-93.8	3.25	
	3/17/2014	16.43	7.73	2.057	3165	1.04	-96.1	4.25	
	3/17/2014	16.39	7.78	2.062	3173	1.24	-96.1	5.25	
	3/17/2014	16.40	7.78	2.067	3180	0.87	-98.4	6.25	
	3/17/2014	16.44	7.83	2.074	3189	0.92	-99.6	7.25	
	6/16/2014	16.61	7.07	1.864	2869	3.63	-115.5	3.00	
	6/16/2014	16.65	7.25	1.869	2875	2.82	-122.4	4.00	
	6/16/2014	16.70	7.12	1.876	2886	2.54	-114.4	5.00	
	6/16/2014	16.72	7.26	1.879	2890	2.31	-121.6	6.00	
	6/16/2014	16.68	7.36	1.877	2887	2.18	-123.7	7.00	
	9/25/2014	15.79	5.23	2.207	3395	2.32	31.4	7.25	
	9/25/2014	15.80	5.19	2.208	3402	2.21	28.3	7.50	
	9/25/2014	16.04	5.21	2.210	3399	2.09	31.8	7.75	
12/16/2014	16.86	7.66	2.477	3811	1.59	-17.4	6.00		
12/16/2014	16.87	7.66	2.476	3810	1.58	-17.0	6.50		
12/16/2014	16.86	7.66	2.475	3808	1.52	-17.2	7.00		
MW-2	3/17/2014	15.19	6.89	2.120	3262	3.88	-62.0	1.25	
	3/17/2014	16.24	7.19	2.109	3245	3.68	-59.6	2.25	
	3/17/2014	16.44	7.14	2.082	3204	3.89	-55.6	3.25	
	3/17/2014	15.76	7.22	2.098	3226	4.46	-66.5	4.25	
	6/16/2014	14.64	6.70	1.899	2921	5.91	-90.6	4.75	
	6/16/2014	14.43	6.51	1.891	2909	6.12	-86.6	5.25	
	6/16/2014	14.42	6.50	1.888	2904	6.00	-85.4	5.75	
	9/16/2014	15.80	6.88	1.900	2960	10.88	51.0	4.00	
	9/16/2014	15.40	6.90	1.900	3040	10.37	29.0	4.50	
	9/16/2014	15.10	6.92	1.900	3030	10.71	67.0	5.00	
	12/16/2014	13.65	7.29	2.438	3751	6.52	102.9	4.50	
	12/16/2014	13.86	7.32	2.442	3758	6.34	98.4	5.00	
12/16/2014	13.89	7.32	2.438	3752	6.17	97.1	5.50		
MW-3	3/17/2014	14.57	8.33	1.813	2791	1.46	-91.5	4.75	
	3/17/2014	14.77	8.41	1.826	2810	1.15	-106.6	5.25	
	3/17/2014	14.69	8.42	1.843	2835	0.87	-120.5	5.75	
	6/16/2014	15.45	7.10	1.708	2628	1.50	-157.6	4.50	
	6/16/2014	15.25	6.94	1.706	2625	1.11	-155.2	5.00	
	6/16/2014	15.18	6.95	7.708	2627	0.95	-154.5	5.50	
	9/16/2014	15.90	7.47	1.800	2790	8.55	-148.0	3.50	
	9/16/2014	15.50	7.46	1.800	2860	8.51	-152.0	3.75	
	9/16/2014	15.50	7.45	1.800	2920	8.37	-141.0	4.00	
	12/16/2014	14.27	7.63	2.181	3355	3.70	-120.6	4.75	
	12/16/2014	14.43	7.63	2.179	3352	1.93	-130.7	5.25	
	12/16/2014	14.51	7.64	2.17	3342	2.03	-135.5	5.75	

TABLE 2

FIELD PARAMETERS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

MW-4	3/17/2014	15.18	8.04	1.871	2878	5.02	-3.9	1.75
	3/17/2014	15.17	7.55	1.872	2879	5.44	-5.8	2.75
	3/17/2014	15.29	7.34	1.877	2888	6.03	-12.7	3.75
	3/17/2014	15.17	7.34	1.879	2891	6.33	-15.6	4.75
	3/17/2014	15.07	7.39	1.881	2894	6.43	-18.5	5.75
	6/16/2014	15.39	6.54	1.707	2626	7.89	-99.4	1.75
	6/16/2014	15.17	7.10	1.707	2625	8.49	-101.2	2.75
	6/16/2014	15.18	6.96	1.709	2629	8.27	-88.2	3.75
	6/16/2014	15.26	7.00	1.712	2633	8.01	-87.4	4.75
	6/16/2014	15.11	6.98	1.712	2634	8.01	-86.4	5.75
	9/25/2014	15.43	5.33	1.998	3072	5.25	49.4	6.50
	9/25/2014	14.96	5.42	2.011	3092	7.44	48.0	7.00
	9/25/2014	14.49	5.32	1.998	3075	7.40	45.3	7.50
12/16/2014	14.66	7.74	2.233	3435	7.83	42.0	4.50	
12/16/2014	14.67	7.73	2.233	3435	7.63	40.0	5.00	
12/16/2014	14.67	7.73	2.233	3435	7.62	36.7	5.50	
MW-5	3/17/2014	15.87	7.06	2.357	3626	1.06	-85.4	1.25
	3/17/2014	16.63	7.06	2.359	3630	0.82	-94.9	2.25
	3/17/2014	16.82	7.14	2.363	3635	0.72	-99.0	3.25
	3/17/2014	16.73	7.25	2.372	3648	0.62	-97.9	4.25
	3/17/2014	16.96	7.17	2.384	3666	0.59	-98.1	5.25
	6/16/2014	16.51	6.04	2.134	3283	2.93	-122.6	1.00
	6/16/2014	16.60	6.32	2.129	3276	2.50	-128.5	2.00
	6/16/2014	16.59	6.38	2.129	3275	2.77	-121.2	3.00
	6/16/2014	16.84	6.58	2.126	3270	2.04	-128.9	4.00
	6/16/2014	16.53	6.56	2.128	--	--	--	5.00
	9/16/2014	18.00	7.03	0.010	13	7.61	102.0	3.00
	9/16/2014	18.00	6.85	2.300	3660	9.32	115.0	4.00
	9/16/2014	18.90	7.05	2.300	3690	10.51	48.0	5.00
12/16/2014	14.61	7.13	2.776	4273	3.54	101.2	4.00	
12/16/2014	14.76	7.15	2.775	4270	2.87	88.3	4.50	
12/16/2014	14.64	7.16	2.774	4269	2.76	82.0	5.00	
MW-6	3/17/2014	16.09	7.06	1.686	2594	1.73	-77.7	0.50
	3/17/2014	16.17	7.07	1.681	2586	1.74	-77.1	1.50
	3/17/2014	16.70	7.14	1.656	2548	2.18	-74.1	2.50
	3/17/2014	16.87	7.17	1.645	2531	2.38	-73.4	3.50
	3/17/2014	16.86	7.18	1.642	2526	2.41	-73.9	4.50
	6/16/2014	18.52	6.43	1.501	2314	5.01	-107.0	1.00
	6/16/2014	16.82	6.32	1.488	2288	3.22	-110.4	2.00
	6/16/2014	16.51	6.38	1.481	2277	2.29	-112.9	3.00
	6/16/2014	16.37	6.42	1.473	2266	2.23	-112.0	4.00
	9/16/2014	17.60	7.11	1.700	2620	10.18	64.0	2.00
	9/16/2014	17.10	6.38	1.700	2560	9.33	70.0	3.00
	9/16/2014	17.00	6.98	1.600	2580	9.41	68.0	4.00
12/16/2014	17.29	7.34	1.981	3047	2.88	38.9	2.75	
12/16/2014	17.29	7.34	1.978	3042	2.92	37.4	3.25	
12/16/2014	17.51	7.33	1.974	3036	2.93	33.4	3.75	

TABLE 2

FIELD PARAMETERS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

MW-7	3/17/2014	16.18	8.44	2.450	3770	4.92	-63.1	2.25
	3/17/2014	16.23	8.27	2.457	3779	5.88	-61.6	3.25
	3/17/2014	16.35	8.26	2.461	3785	5.19	-64.5	4.25
	3/17/2014	16.36	8.47	2.458	3781	5.53	-68.0	5.25
	3/17/2014	16.35	8.58	2.458	3781	5.62	-70.1	6.25
	6/16/2014	16.02	7.19	2.241	3448	9.86	-67.6	2.25
	6/16/2014	15.99	7.64	2.240	3447	9.41	-66.2	3.25
	6/16/2014	15.96	7.93	2.239	3445	8.86	-64.6	4.25
	6/16/2014	16.00	8.04	2.241	3448	7.97	-64.2	5.25
	6/16/2014	16.02	8.21	2.244	3451	8.30	-63.0	6.25
	9/25/2014	15.14	5.46	2.670	4108	2.48	56.4	6.50
	9/25/2014	15.20	5.57	2.654	4082	3.52	33.0	6.75
	9/25/2014	15.10	5.58	2.653	4082	4.28	28.6	7.00
12/16/2014	16.39	9.02	2.983	4589	9.86	27.5	5.25	
12/16/2014	16.33	9.05	2.979	4583	9.86	30.4	5.75	
12/16/2014	16.41	9.05	2.978	4581	9.76	32.7	6.25	
MW-8R	3/17/2014	16.47	8.18	2.070	3185	1.09	-117.1	1.50
	3/17/2014	18.21	7.90	2.144	3302	0.48	-110.3	2.50
	3/17/2014	17.22	7.80	2.134	3285	0.39	-117.4	3.50
	3/17/2014	16.91	7.77	2.151	3309	0.36	-122.9	4.50
	3/17/2014	16.85	7.72	2.155	3315	0.35	-127.6	5.50
	6/16/2014	16.60	6.70	1.539	2364	6.44	-146.9	1.00
	6/16/2014	16.67	6.65	1.539	2370	2.57	-150.6	2.00
	6/16/2014	16.64	6.76	1.888	2922	1.46	-154.5	3.00
	6/16/2014	16.56	6.87	1.930	2968	1.02	-156.6	4.00
	6/16/2014	16.83	6.93	1.921	2955	0.85	-159.8	5.00
	9/25/2014	16.03	5.11	2.162	3326	2.06	31.1	5.50
	9/25/2014	15.81	5.08	2.172	3341	2.18	25.6	5.75
	9/25/2014	15.82	5.10	2.184	3360	2.11	23.6	6.00
12/16/2014	17.25	7.46	2.492	3836	2.21	-29.5	4.25	
12/16/2014	17.20	7.47	2.511	3865	1.32	-23.0	4.75	
12/16/2014	17.67	7.49	2.529	3892	0.95	-17.2	5.25	

Notes:

TDS = total dissolved solids

DO = dissolved oxygen

ORP = oxidation-reduction potential

TABLE 3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARRIBA COUNTY, NEW MEXICO**

<i>Well ID</i>	<i>Date</i>	<i>Benzene (mg/L)</i>	<i>Toluene (mg/L)</i>	<i>Ethylbenzene (mg/L)</i>	<i>Xylenes (total) (mg/L)</i>	<i>TPH-DRO (mg/L)</i>	<i>TPH-GRO (mg/L)</i>	<i>Manganese (dissolved) (mg/L)</i>	<i>Selenium (dissolved) (mg/L)</i>	<i>Nitrate (as N) (mg/L)</i>	<i>Sulfate (mg/L)</i>	<i>Total Dissolved Solids (TDS) (mg/L)</i>	<i>Heterotrophic Plate Count (CFU/mL)</i>
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-1	3/17/2011	<b>0.066</b>	0.39	0.011	0.084	0.28	1.5	<b>2.77</b>	< 0.01	<0.500	<b>1,610</b>	<b>2,730</b>	NA
	8/17/2011	<b>0.0189</b>	0.0068	< 0.001	0.0044	< 0.50	< 0.50	<b>0.318</b>	< 0.015	0.25	<b>1,500</b>	<b>2,480</b>	180,000
	10/18/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	300,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>6.40</b>	<b>0.055</b>	0.78	<b>1,710</b>	<b>2,480</b>	23,000
	6/5/2012	< 0.001	0.002	< 0.001	< 0.003	NA	NA	<b>5.15</b>	0.033	9.4	<b>1,520</b>	NA	93,000
	6/5/2012 (DUP)	< 0.001	0.002	< 0.001	< 0.003	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>2.60</b>	0.044	<b>27.5</b>	<b>1,070</b>	<b>2,140</b>	>80000
	9/18/2012 (DUP)	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	NA	NA	NA	NA	NA	>80,000
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.10</b>	<b>0.568</b>	<b>25.3</b>	<b>1,150</b>	<b>2,180</b>	76,000
	1/8/2013 (DUP)	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	NA	NA	NA	NA	NA	142,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.49</b>	<b>0.079</b>	<b>37</b>	<b>1,000</b>	<b>1,980</b>	280,000
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.52</b>	<b>0.056</b>	<b>31.1</b>	<b>1,050</b>	NA	81,500
	6/11/2013 (DUP)	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.164	0.0492	<b>18.7</b>	<b>1,130</b>	<b>2,090</b>	2,300
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.132	0.0349	<b>22.5</b>	<b>1,040</b>	<b>1,990</b>	335,000
	3/18/2014	0.0036	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.643</b>	< 0.015	<b>20.1</b>	<b>1,170</b>	<b>2,270</b>	6,700
	6/16/2014	NA	NA	NA	NA	NA	NA	<b>1.200</b>	< 0.015	5.7	<b>1,380</b>	<b>2,300</b>	NA
9/25/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.570</b>	< 0.015	4.4	<b>1,690</b>	NA	NA	
12/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.49</b>	< 0.015	2.9	<b>1,580</b>	<b>2,410</b>	NA	

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-DRO (mg/L)	TPH-GRO (mg/L)	Manganese (dissolved) (mg/L)	Selenium (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Heterotrophic Plate Count (CFU/mL)
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-2	3/17/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.11	< 0.1	0.334	0.0664	55.8	1,000	2950	NA
	8/17/2011	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	0.179	0.0726	71.9 E / 54.1	1,040	2110	61,000
	10/18/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	124,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0360	0.059	44.9	1,350	2,220	14,900
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0078	0.061	4.3	1,500	NA	32,000
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0194	0.067	42.5	1,150	2,440	6,500
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0057	0.0688	41.8	1,230	2,590	29,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0188	0.0728	43.3	1,200	1,930	4,100
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0086	0.0666	40.6	1,230	NA	18,000
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	< 0.0050	0.0657	35.6	1,200	2,210	160
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0069	0.0745	33.5	1,300	2,390	2,435
	3/18/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.281	0.080	40.2	1,320	2,580	670
	6/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.09	0.073	22.2	1,280	2,360	NA
	9/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.783	0.0734	34	1,140	2,440	NA
12/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.746	0.0715	31.0	1,380	2,360	NA	

TABLE 3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARRIBA COUNTY, NEW MEXICO**

<i>Well ID</i>	<i>Date</i>	<i>Benzene (mg/L)</i>	<i>Toluene (mg/L)</i>	<i>Ethylbenzene (mg/L)</i>	<i>Xylenes (total) (mg/L)</i>	<i>TPH-DRO (mg/L)</i>	<i>TPH-GRO (mg/L)</i>	<i>Manganese (dissolved) (mg/L)</i>	<i>Selenium (dissolved) (mg/L)</i>	<i>Nitrate (as N) (mg/L)</i>	<i>Sulfate (mg/L)</i>	<i>Total Dissolved Solids (TDS) (mg/L)</i>	<i>Heterotrophic Plate Count (CFU/mL)</i>
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-3	3/17/2011	< 0.001	0.013	< 0.001	0.0042	< 0.1	< 0.1	1.79	0.0316	29.7	857	2360	NA
	8/17/2011	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	1.42	0.0524	33.0	972	1960	18,000
	10/18/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	230,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.600	0.038	22.0	1,140	2,050	11,900
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.43	0.048	15.0	1,380	NA	22,000
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.24	0.032	12.2	1,050	2,150	23,000
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.62	0.0673	24.6	1,140	2,240	51,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.83	< 0.015	0.42	1,080	2,030	70
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.75	< 0.015	0.76	1,110	NA	830
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.7	< 0.015	1.4	1,120	1,910	110
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.77	< 0.015	0.15	1,180	1,970	284
	1/7/2014 (DUP)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	350
	3/18/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	1.81	< 0.015	0.11	1,150	2,050	870
	6/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	2	0.024	8.8	1,130	1,190	NA
	9/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	2.29	0.0261	11.3	1,060	2,240	NA
12/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	2.06	< 0.015	6.1	1,210	2,110	NA	

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-DRO (mg/L)	TPH-GRO (mg/L)	Manganese (dissolved) (mg/L)	Selenium (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Heterotrophic Plate Count (CFU/mL)
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-4	3/17/2011	< 0.001	< 0.001	< 0.001	< 0.001	0.14	< 0.1	0.022	0.042	10.4	1,290	2,650	NA
	8/17/2011	< 0.001	< 0.001	< 0.001	< 0.003	< 0.50	< 0.50	0.0062	0.0402	9.4	1,240	2,000	9,800
	10/18/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	90,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0170	0.0350	8.6	1,380	2,070	40,000
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0814	0.0369	7.5	1,540	NA	49,000
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.1030	0.0394	7.8	1,190	2,180	4,000
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0289	0.0386	9.3	1,240	2,230	202,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0605	0.0441	8.9	1,200	1,950	42,500
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0484	0.0369	7.3	1,260	NA	33,000
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0303	0.0369	8.6	1,180	2,090	910
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0265	0.0381	5.5	1,350	1,960	1,160
	3/18/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0227	0.0410	8.2	1,280	2,180	1,865
	6/16/2014	NA	NA	NA	NA	NA	NA	0.0080	0.0340	6.5	1,240	1,950	NA
	9/25/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0160	0.0335	7	1,260	NA	NA
12/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0155	0.0314	6.8	1,330	2,250	NA	

TABLE 3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY  
CONOCOPHILLIPS COMPANY  
SAN JUAN 29-7 UNIT 37  
RIO ARRIBA COUNTY, NEW MEXICO**

<i>Well ID</i>	<i>Date</i>	<i>Benzene (mg/L)</i>	<i>Toluene (mg/L)</i>	<i>Ethylbenzene (mg/L)</i>	<i>Xylenes (total) (mg/L)</i>	<i>TPH-DRO (mg/L)</i>	<i>TPH-GRO (mg/L)</i>	<i>Manganese (dissolved) (mg/L)</i>	<i>Selenium (dissolved) (mg/L)</i>	<i>Nitrate (as N) (mg/L)</i>	<i>Sulfate (mg/L)</i>	<i>Total Dissolved Solids (TDS) (mg/L)</i>	<i>Heterotrophic Plate Count (CFU/mL)</i>
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-5	10/18/2011	< 0.001	< 0.001	< 0.001	< 0.003	< 0.5	< 0.5	NA	NA	NA	NA	NA	970,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.10</b>	< 0.015	0.12	<b>3,500</b>	<b>2,760</b>	252,000
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.868</b>	< 0.015	< 0.10	<b>2,040</b>	NA	63,000
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.791</b>	< 0.015	< 0.10	<b>1,620</b>	<b>2,830</b>	130,000
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.58</b>	< 0.015	< 0.10	<b>1,710</b>	<b>2,950</b>	102,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.356</b>	< 0.015	0.3	<b>1,700</b>	<b>2,370</b>	16,950
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.609</b>	< 0.015	0.25	<b>1,630</b>	NA	20,500
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.368</b>	< 0.015	< 0.10	<b>1,640</b>	<b>2,540</b>	660
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.396</b>	< 0.015	< 0.10	<b>1,740</b>	<b>2,770</b>	5,450
	3/18/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.606</b>	< 0.015	< 0.10	<b>1,760</b>	<b>2,800</b>	1,315
	6/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.93</b>	< 0.015	0.17	<b>1,730</b>	<b>2,320</b>	NA
	9/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.433</b>	< 0.015	0.14	<b>1,490</b>	<b>2,850</b>	NA
12/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0706	< 0.015	0.13	<b>1,790</b>	<b>2,710</b>	NA	
MW-6	10/18/2011	<b>0.033</b>	< 0.001	< 0.001	0.012	< 0.5	< 0.5	NA	NA	NA	NA	NA	720,000
	2/23/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<0.005	<b>0.0590</b>	<b>25.8</b>	<b>950</b>	<b>1,760</b>	8,900
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.600</b>	0.0454	<b>35.0</b>	<b>1,090</b>	NA	35,000
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>1.110</b>	0.0460	<b>29.5</b>	<b>955</b>	<b>1,990</b>	12,000
	1/8/2013	0.0012	< 0.001	< 0.001	< 0.003	NA	NA	0.158	<b>0.0536</b>	<b>25.6</b>	<b>978</b>	<b>1,980</b>	1,910,000
	3/26/2013	0.0022	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.282</b>	<b>0.0602</b>	<b>30.9</b>	<b>945</b>	<b>1,740</b>	25,500
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.328</b>	<b>0.0621</b>	<b>27.6</b>	<b>946</b>	NA	4,750
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.299</b>	0.0389	<b>22.7</b>	<b>929</b>	<b>1,710</b>	65
	1/7/2014	0.0026	< 0.001	< 0.001	0.0034	NA	NA	<b>0.268</b>	0.0417	<b>19.5</b>	<b>984</b>	<b>2,060</b>	2,460
	3/18/2014	0.0012	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.246</b>	0.0392	<b>23.6</b>	<b>1,000</b>	<b>2,000</b>	710
	6/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.140	0.0360	4.6	<b>955</b>	<b>1,780</b>	NA
	9/16/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.115	0.0386	<b>23.2</b>	<b>846</b>	<b>1,930</b>	NA
12/16/2014	0.0014	< 0.001	< 0.001	< 0.003	NA	NA	0.147	0.0343	<b>27.2</b>	<b>1,000</b>	<b>1,830</b>	NA	

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-DRO (mg/L)	TPH-GRO (mg/L)	Manganese (dissolved) (mg/L)	Selenium (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Heterotrophic Plate Count (CFU/mL)
<b>NMWQCC Standards</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>NE</b>	<b>NE</b>	<b>0.2</b>	<b>0.05</b>	<b>10</b>	<b>600</b>	<b>1,000</b>	<b>NE</b>
MW-7	10/18/2011	< 0.001	< 0.001	< 0.001	< 0.003	< 0.5	< 0.5	NA	NA	NA	NA	NA	2,000,000
	2/23/2012	< 0.001	0.0011	< 0.001	0.0034	NA	NA	< 0.005	0.022	4.6	<b>3,320</b>	<b>4,660</b>	< 1
	6/5/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.019	0.030	1.1	<b>1,820</b>	NA	8
	9/18/2012	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.012	0.024	1.0	<b>1,610</b>	<b>4,280</b>	1,900
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0093	0.0164	1.3	<b>1,770</b>	<b>3,400</b>	145,000
	3/26/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	< 0.005	< 0.015	5.3	<b>1,730</b>	<b>3,050</b>	79
	6/11/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.0082	< 0.015	<b>18.7</b>	<b>1,700</b>	NA	18
	9/10/2013	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	0.168	< 0.015	<b>31.4</b>	<b>1,740</b>	<b>3,080</b>	110
	1/7/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.452</b>	< 0.015	<b>28.5</b>	<b>1,950</b>	<b>3,320</b>	8,300
	3/18/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.438</b>	< 0.015	<b>35</b>	<b>1,920</b>	<b>3,350</b>	940
	6/16/2014	NA	NA	NA	NA	NA	NA	<b>0.49</b>	< 0.015	2.7	<b>1,930</b>	<b>2,940</b>	NA
	9/25/2014	< 0.001	< 0.001	< 0.001	< 0.003	NA	NA	<b>0.231</b>	< 0.015	<b>29.7</b>	<b>1,970</b>	NA	NA
12/16/2014	0.0013	0.0031	< 0.001	< 0.003	NA	NA	<b>0.435</b>	< 0.015	3.9	<b>2,140</b>	<b>2,610</b>	NA	
MW-8	10/19/2011	<b>0.15</b>	<b>1.24</b>	0.070	<b>1.43</b>	< 0.5	7.1	NA	NA	NA	NA	NA	2,300,000
	2/23/2012	<b>0.036</b>	<b>0.772</b>	0.054	<b>1.35</b>	NA	NA	< 0.005	0.049	3.2	<b>813</b>	<b>5,790</b>	14
	2/23/2012 (DUP)	<b>0.069</b>	<b>0.876</b>	0.109	<b>1.66</b>	NA	NA	NA	NA	NA	NA	NA	NA
	6/5/2012	<b>0.013</b>	0.120	0.025	0.447	NA	NA	0.022	0.045	<b>18.1</b>	<b>793</b>	NA	630
	9/20/2012	0.0098	0.002	0.006	0.342	NA	NA	NA	NA	<b>21.8</b>	<b>1,130</b>	<b>2,960</b>	NA
	1/8/2013	<b>0.0369</b>	0.0199	0.0018	0.0488	NA	NA	NA	NA	<b>30.4</b>	<b>1,260</b>	<b>2,700</b>	222,000
	3/26/2013	Not sampled due to damaged well casing.											
	6/11/2013	Not sampled due to damaged well casing.											
7/13/2013	Plugged and Abandoned												

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY  
 CONOCOPHILLIPS COMPANY  
 SAN JUAN 29-7 UNIT 37  
 RIO ARRIBA COUNTY, NEW MEXICO

Well ID	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	TPH-DRO (mg/L)	TPH-GRO (mg/L)	Manganese (dissolved) (mg/L)	Selenium (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Heterotrophic Plate Count (CFU/mL)
NMWQCC Standards		0.01	0.75	0.75	0.62	NE	NE	0.2	0.05	10	600	1,000	NE
MW-8R	9/10/2013	<b>0.0100</b>	0.0171	0.0017	0.0615	NA	NA	<b>0.395</b>	0.038	<b>38.6</b>	<b>1,230</b>	<b>2,430</b>	5,700
	9/10/2013 (DUP)	0.0083	0.0125	0.0018	0.0443	NA	NA	NA	NA	NA	NA	NA	8,700
	1/7/2014	<b>0.179</b>	0.353	0.0105	<b>0.69</b>	NA	NA	<b>0.255</b>	0.0374	<b>28.3</b>	<b>1,360</b>	<b>2,900</b>	425,000
	1/7/2014 (DUP)	<b>0.192</b>	0.344	0.0107	<b>0.715</b>	NA	NA	NA	NA	NA	NA	NA	NA
	3/18/2014	<b>0.103</b>	0.154	0.0076	0.164	NA	NA	0.106	< 0.015	<b>35.0</b>	<b>1,290</b>	<b>2,460</b>	8,550
	3/18/2014 (DUP)	<b>0.116</b>	0.149	0.0077	0.156	NA	NA	NA	NA	NA	NA	NA	NA
	6/16/2014	<b>0.319</b>	<b>0.846</b>	0.0305	0.505	NA	NA	<b>1.5</b>	< 0.015	4.4	<b>1,510</b>	<b>2,330</b>	NA
	6/16/2014 (DUP)	<b>0.291</b>	<b>0.816</b>	0.0296	<b>0.642</b>	NA	NA	NA	NA	NA	NA	NA	NA
	9/25/2014	<b>0.172</b>	0.0022	< 0.001	0.0067	NA	NA	<b>1.38</b>	< 0.015	6.6	<b>1,530</b>	NA	NA
	9/25/2014 (DUP)	<b>0.182</b>	0.0025	< 0.001	0.0068	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/2014	<b>0.187</b>	0.301	0.0248	0.368	NA	NA	<b>1.01</b>	< 0.015	<b>13</b>	<b>1,470</b>	<b>2,440</b>	NA
	12/16/2014 (DUP)	<b>0.195</b>	0.283	0.0246	0.353	NA	NA	NA	NA	NA	NA	NA	NA

**Notes:**

MW = Monitoring Well

NMWQCC = New Mexico Water Quality Control Commission

BOLD = Exceeds NMWQCC Groundwater Quality Standard

mg/L = milligrams per liter (parts per million)

'<' = Analyte not detected above set laboratory detection limit

E = Analyte concentration exceeded the calibration range

NE = Not Established

NA = Not analyzed

TPH DRO = total petroleum hydrocarbons diesel range organics

TPH GRO = total petroleum hydrocarbons gasoline range organics

-- = No data

Cells shaded in gray indicate groundwater samples collected prior to CoolOx™ treatment

# Appendix A

## Groundwater Laboratory Analytical Reports

April 01, 2014

Jeff Walker  
COP Conestoga-Rovers & Associa  
6121 Indian School Rd. NE  
Ste 200  
Albuquerque, NM 87110

RE: Project: 075034 SAN JUAN 29-7 UNIT 37  
Pace Project No.: 60165133

Dear Jeff Walker:

Enclosed are the analytical results for sample(s) received by the laboratory on March 19, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa  
Christine Matthews, CRA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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### **Southeast Kansas Certification IDs**

808 West McKay, Frontenac, KS 66763

Arkansas Certification #: 13-012-0

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Oklahoma Certification #: 2012-051

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Minnesota Certification #: 495004

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60165133001	GW-075034-031814-CK-MW-1	Water	03/18/14 11:05	03/19/14 08:30
60165133002	GW-075034-031814-CK-MW-2	Water	03/18/14 11:00	03/19/14 08:30
60165133003	GW-075034-031814-CK-MW-3	Water	03/18/14 11:35	03/19/14 08:30
60165133004	GW-075034-031814-CK-MW-4	Water	03/18/14 10:10	03/19/14 08:30
60165133005	GW-075034-031814-CK-MW-5	Water	03/18/14 10:35	03/19/14 08:30
60165133006	GW-075034-031814-CK-MW-6	Water	03/18/14 10:40	03/19/14 08:30
60165133007	GW-075034-031814-CK-MW-7	Water	03/18/14 10:15	03/19/14 08:30
60165133008	GW-075034-031814-CK-DUP	Water	03/18/14 09:00	03/19/14 08:30
60165133009	GW-075034-031814-CK-1	Water	03/18/14 00:00	03/19/14 08:30
60165133010	GW-075034-031814-CK-MW-8R	Water	03/18/14 11:40	03/19/14 08:30
60165122001	GW-075034-031814-CK-MW-1	Water	03/18/14 12:35	03/19/14 09:45
60165122002	GW-075034-031814-CK-MW-2	Water	03/18/14 12:30	03/19/14 09:45
60165122003	GW-075034-031814-CK-MW-3	Water	03/18/14 12:40	03/19/14 09:45
60165122004	GW-075034-031814-CK-MW-4	Water	03/18/14 12:10	03/19/14 09:45
60165122005	GW-075034-031814-CK-MW-5	Water	03/18/14 12:20	03/19/14 09:45
60165122006	GW-075034-031814-CK-MW-6	Water	03/18/14 12:25	03/19/14 09:45
60165122007	GW-075034-031814-CK-MW-7	Water	03/18/14 12:15	03/19/14 09:45
60165122008	GW-075034-031814-CK-MW-8R	Water	03/18/14 12:45	03/19/14 09:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60165133001	GW-075034-031814-CK-MW-1	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133002	GW-075034-031814-CK-MW-2	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133003	GW-075034-031814-CK-MW-3	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133004	GW-075034-031814-CK-MW-4	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133005	GW-075034-031814-CK-MW-5	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133006	GW-075034-031814-CK-MW-6	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133007	GW-075034-031814-CK-MW-7	EPA 6010	JGP	2
		EPA 8260	JTK	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165133008	GW-075034-031814-CK-DUP	EPA 8260	JTK	8
60165133009	GW-075034-031814-CK-1	EPA 8260	JTK	8

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60165133010	GW-075034-031814-CK-MW-8R	EPA 6010	JGP	2
		EPA 8260	EAK, PRG	8
		SM 2540C	JMC1	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60165122001	GW-075034-031814-CK-MW-1	SM 9215B	TDH	1
60165122002	GW-075034-031814-CK-MW-2	SM 9215B	TDH	1
60165122003	GW-075034-031814-CK-MW-3	SM 9215B	TDH	1
60165122004	GW-075034-031814-CK-MW-4	SM 9215B	TDH	1
60165122005	GW-075034-031814-CK-MW-5	SM 9215B	TDH	1
60165122006	GW-075034-031814-CK-MW-6	SM 9215B	TDH	1
60165122007	GW-075034-031814-CK-MW-7	SM 9215B	TDH	1
60165122008	GW-075034-031814-CK-MW-8R	SM 9215B	TDH	1

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

8 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Method:** SM 9215B

**Description:** M BIO HPC (Drinking Water)

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

8 samples were analyzed for SM 9215B. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

u3: Analysis initiated more than 8 hours but less than 24 hours after sample collection.

- GW-075034-031814-CK-MW-1 (Lab ID: 60165122001)
- GW-075034-031814-CK-MW-2 (Lab ID: 60165122002)
- GW-075034-031814-CK-MW-3 (Lab ID: 60165122003)
- GW-075034-031814-CK-MW-4 (Lab ID: 60165122004)
- GW-075034-031814-CK-MW-5 (Lab ID: 60165122005)
- GW-075034-031814-CK-MW-6 (Lab ID: 60165122006)
- GW-075034-031814-CK-MW-7 (Lab ID: 60165122007)
- GW-075034-031814-CK-MW-8R (Lab ID: 60165122008)

**Sample Preparation:**

The samples were prepared in accordance with SM 9215B with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Method:** EPA 8260

**Description:** 8260 MSV UST, Water

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

10 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/60323

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/60408

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/60459

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

8 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

8 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

---

**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** April 01, 2014

**General Information:**

8 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/28673

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60165131002,60165138001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1346890)
- Nitrogen, Nitrate

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-1      **Lab ID:** 60165133001      Collected: 03/18/14 11:05      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>643</b>	ug/L	5.0	1	03/21/14 14:30	03/25/14 11:58	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	03/21/14 14:30	03/25/14 11:58	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	<b>3.6</b>	ug/L	1.0	1		03/26/14 09:33	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 09:33	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 09:33	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 09:33	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	80-120	1		03/26/14 09:33	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		03/26/14 09:33	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		03/26/14 09:33	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		03/26/14 09:33		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2270</b>	mg/L	5.0	1		03/24/14 16:25		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1170</b>	mg/L	100	100		03/31/14 18:46	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>20.1</b>	mg/L	1.0	10		03/19/14 17:23		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-2      **Lab ID:** 60165133002      Collected: 03/18/14 11:00      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	281	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:05	7439-96-5	
Selenium, Dissolved	80.0	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:05	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		03/26/14 09:48	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 09:48	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 09:48	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 09:48	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		03/26/14 09:48	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		03/26/14 09:48	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120	1		03/26/14 09:48	17060-07-0	
Preservation pH	1.0		1.0	1		03/26/14 09:48		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2580	mg/L	5.0	1		03/24/14 16:25		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1320	mg/L	100	100		03/31/14 19:32	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	40.2	mg/L	1.0	10		03/19/14 17:09		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-3      **Lab ID:** 60165133003      Collected: 03/18/14 11:35      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>1810</b>	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:08	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:08	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		03/26/14 10:04	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 10:04	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 10:04	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 10:04	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		03/26/14 10:04	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		03/26/14 10:04	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120	1		03/26/14 10:04	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		03/26/14 10:04		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2050</b>	mg/L	5.0	1		03/24/14 16:25		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1150</b>	mg/L	100	100		03/31/14 20:03	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>0.11</b>	mg/L	0.10	1		03/19/14 17:24		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-4      **Lab ID:** 60165133004      Collected: 03/18/14 10:10      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	22.7	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:12	7439-96-5	
Selenium, Dissolved	41.0	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:12	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		03/26/14 10:20	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 10:20	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 10:20	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 10:20	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	80-120	1		03/26/14 10:20	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		03/26/14 10:20	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		03/26/14 10:20	17060-07-0	
Preservation pH	1.0		1.0	1		03/26/14 10:20		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2180	mg/L	5.0	1		03/25/14 10:38		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1280	mg/L	100	100		03/31/14 20:18	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	8.2	mg/L	0.50	5		03/19/14 17:25		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-5      **Lab ID:** 60165133005      Collected: 03/18/14 10:35      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>606</b>	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:15	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:15	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		03/26/14 10:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 10:36	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 10:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 10:36	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		03/26/14 10:36	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		03/26/14 10:36	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		03/26/14 10:36	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		03/26/14 10:36		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2800</b>	mg/L	5.0	1		03/25/14 10:39		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1760</b>	mg/L	200	200		03/31/14 20:34	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	ND	mg/L	0.10	1		03/19/14 17:26		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-6      **Lab ID:** 60165133006      Collected: 03/18/14 10:40      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	246	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:19	7439-96-5	
Selenium, Dissolved	39.2	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:19	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	1.2	ug/L	1.0	1		03/26/14 10:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 10:52	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 10:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 10:52	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	80-120	1		03/26/14 10:52	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		03/26/14 10:52	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		03/26/14 10:52	17060-07-0	
Preservation pH	1.0		1.0	1		03/26/14 10:52		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2000	mg/L	5.0	1		03/25/14 10:39		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1000	mg/L	100	100		03/31/14 21:20	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	23.6	mg/L	1.0	10		03/19/14 17:13		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-7      **Lab ID:** 60165133007      Collected: 03/18/14 10:15      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	438	ug/L	5.0	1	03/21/14 14:30	03/25/14 12:22	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	03/21/14 14:30	03/25/14 12:22	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		03/26/14 11:08	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/26/14 11:08	100-41-4	
Toluene	ND	ug/L	1.0	1		03/26/14 11:08	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/26/14 11:08	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		03/26/14 11:08	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		03/26/14 11:08	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		03/26/14 11:08	17060-07-0	
Preservation pH	1.0		1.0	1		03/26/14 11:08		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	3350	mg/L	5.0	1		03/25/14 10:39		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1920	mg/L	200	200		03/31/14 21:35	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	35.0	mg/L	1.0	10		03/19/14 17:13		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-DUP    **Lab ID:** 60165133008    Collected: 03/18/14 09:00    Received: 03/19/14 08:30    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	116	ug/L	1.0	1		03/26/14 11:24	71-43-2	
Ethylbenzene	7.7	ug/L	1.0	1		03/26/14 11:24	100-41-4	
Toluene	149	ug/L	1.0	1		03/26/14 11:24	108-88-3	
Xylene (Total)	156	ug/L	3.0	1		03/26/14 11:24	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		03/26/14 11:24	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		03/26/14 11:24	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		03/26/14 11:24	17060-07-0	
Preservation pH	1.0		1.0	1		03/26/14 11:24		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Sample: <b>GW-075034-031814-CK-1</b>		Lab ID: <b>60165133009</b>	Collected: 03/18/14 00:00	Received: 03/19/14 08:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		03/26/14 11:40	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		03/26/14 11:40	100-41-4	
Toluene	ND ug/L		1.0	1		03/26/14 11:40	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		03/26/14 11:40	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101 %		80-120	1		03/26/14 11:40	2037-26-5	
4-Bromofluorobenzene (S)	99 %		80-120	1		03/26/14 11:40	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-120	1		03/26/14 11:40	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		03/26/14 11:40		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-8R      **Lab ID:** 60165133010      Collected: 03/18/14 11:40      Received: 03/19/14 08:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>106</b>	ug/L	5.0	1	03/21/14 14:30	03/25/14 14:26	7439-96-5	
Selenium, Dissolved	<b>32.0</b>	ug/L	15.0	1	03/21/14 14:30	03/25/14 14:26	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	<b>103</b>	ug/L	1.0	1		03/29/14 03:40	71-43-2	
Ethylbenzene	<b>7.6</b>	ug/L	1.0	1		03/29/14 03:40	100-41-4	
Toluene	<b>154</b>	ug/L	1.0	1		03/31/14 15:23	108-88-3	
Xylene (Total)	<b>164</b>	ug/L	3.0	1		03/29/14 03:40	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	96 %		80-120	1		03/29/14 03:40	2037-26-5	
4-Bromofluorobenzene (S)	97 %		80-120	1		03/29/14 03:40	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		80-120	1		03/29/14 03:40	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		03/29/14 03:40		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2460</b>	mg/L	5.0	1		03/25/14 10:40		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1290</b>	mg/L	100	100		03/31/14 21:51	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>35.0</b>	mg/L	1.0	10		03/19/14 17:14		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-1      **Lab ID:** 60165122001      Collected: 03/18/14 12:35      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>6700</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-2      **Lab ID:** 60165122002      Collected: 03/18/14 12:30      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>670</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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### ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-3      **Lab ID:** 60165122003      Collected: 03/18/14 12:40      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>870</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-4      **Lab ID:** 60165122004      Collected: 03/18/14 12:10      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>1865</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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### ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

**Sample:** GW-075034-031814-CK-MW-5      **Lab ID:** 60165122005      Collected: 03/18/14 12:20      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B Preparation Method: SM 9215B								
Heterotrophic Plate Count	1315	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-6      **Lab ID:** 60165122006      Collected: 03/18/14 12:25      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>710</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-7      **Lab ID:** 60165122007      Collected: 03/18/14 12:15      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>940</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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**Sample:** GW-075034-031814-CK-MW-8R      **Lab ID:** 60165122008      Collected: 03/18/14 12:45      Received: 03/19/14 09:45      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>MBIO HPC (Drinking Water)</b>								
Analytical Method: SM 9215B      Preparation Method: SM 9215B								
Heterotrophic Plate Count	<b>8550</b>	CFU/mL	1.0	1	03/19/14 11:45	03/21/14 10:30		u3

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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QC Batch:	MBIO/12730	Analysis Method:	SM 9215B
QC Batch Method:	SM 9215B	Analysis Description:	9215B Heterotrophic Plate Count
Associated Lab Samples:	60165122001, 60165122002, 60165122003, 60165122004, 60165122005, 60165122006, 60165122007, 60165122008		

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METHOD BLANK:	1349254	Matrix:	Solid
Associated Lab Samples:	60165122001, 60165122002, 60165122003, 60165122004, 60165122005, 60165122006, 60165122007, 60165122008		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Heterotrophic Plate Count	CFU/mL	<1	1.0	03/21/14 10:30	

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SAMPLE DUPLICATE: 1349255

Parameter	Units	60165122004 Result	Dup Result	RPD	Max RPD	Qualifiers
Heterotrophic Plate Count	CFU/mL	1865	1845			

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

QC Batch: MPRP/26561 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60165133001, 60165133002, 60165133003, 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

METHOD BLANK: 1348200 Matrix: Water  
 Associated Lab Samples: 60165133001, 60165133002, 60165133003, 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	03/25/14 11:52	
Selenium, Dissolved	ug/L	ND	15.0	03/25/14 11:52	

LABORATORY CONTROL SAMPLE: 1348201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	946	95	80-120	
Selenium, Dissolved	ug/L	1000	960	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1348202 1348203

Parameter	Units	60165318005		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Manganese, Dissolved	ug/L	245	1000	1000	1250	1100	100	85	75-125	13	20		
Selenium, Dissolved	ug/L	ND	1000	1000	1000	874	100	87	75-125	13	20		

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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QC Batch:	MSV/60408	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60165133010		

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METHOD BLANK: 1351946 Matrix: Water

Associated Lab Samples: 60165133010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/29/14 03:08	
Ethylbenzene	ug/L	ND	1.0	03/29/14 03:08	
Xylene (Total)	ug/L	ND	3.0	03/29/14 03:08	
1,2-Dichloroethane-d4 (S)	%	98	80-120	03/29/14 03:08	
4-Bromofluorobenzene (S)	%	97	80-120	03/29/14 03:08	
Toluene-d8 (S)	%	95	80-120	03/29/14 03:08	

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LABORATORY CONTROL SAMPLE: 1351947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	17.9	90	80-120	
Ethylbenzene	ug/L	20	22.0	110	80-121	
Xylene (Total)	ug/L	60	65.2	109	80-121	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			94	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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QC Batch:	MSV/60459	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60165133010		

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METHOD BLANK: 1353045 Matrix: Water

Associated Lab Samples: 60165133010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	ND	1.0	03/31/14 14:22	
1,2-Dichloroethane-d4 (S)	%	95	80-120	03/31/14 14:22	
4-Bromofluorobenzene (S)	%	96	80-120	03/31/14 14:22	
Toluene-d8 (S)	%	99	80-120	03/31/14 14:22	

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LABORATORY CONTROL SAMPLE: 1353046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene	ug/L	20	20.5	103	80-122	
1,2-Dichloroethane-d4 (S)	%			91	80-120	
4-Bromofluorobenzene (S)	%			105	80-120	
Toluene-d8 (S)	%			100	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

QC Batch: WET/46832

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60165133001, 60165133002, 60165133003

METHOD BLANK: 1349059

Matrix: Water

Associated Lab Samples: 60165133001, 60165133002, 60165133003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/24/14 16:19	

LABORATORY CONTROL SAMPLE: 1349060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 1349061

Parameter	Units	60165111001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	676	669	1	10	

SAMPLE DUPLICATE: 1349062

Parameter	Units	60165111007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	756	771	2	10	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

QC Batch: WET/46869

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

METHOD BLANK: 1349517

Matrix: Water

Associated Lab Samples: 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/25/14 10:38	

LABORATORY CONTROL SAMPLE: 1349518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 1349519

Parameter	Units	60165133004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2180	2150	1	10	

SAMPLE DUPLICATE: 1349520

Parameter	Units	60165442008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	27800	28000	0	10	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

QC Batch: WETA/28673 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
 Associated Lab Samples: 60165133001, 60165133002, 60165133003, 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

METHOD BLANK: 1346887 Matrix: Water  
 Associated Lab Samples: 60165133001, 60165133002, 60165133003, 60165133004, 60165133005, 60165133006, 60165133007, 60165133010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	03/19/14 16:59	

LABORATORY CONTROL SAMPLE: 1346888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	108	85-115	

MATRIX SPIKE SAMPLE: 1346889

Parameter	Units	60165131002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.20	1.6	1.9	109	85-115	

MATRIX SPIKE SAMPLE: 1346890

Parameter	Units	60165138001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	37.1	16	49.5	77	85-115	M1

SAMPLE DUPLICATE: 1346891

Parameter	Units	60165139001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	30.0	29.8	1	20	

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## QUALIFIERS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/60323

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/60408

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/60459

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

u3 Analysis initiated more than 8 hours but less than 24 hours after sample collection.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60165133001	GW-075034-031814-CK-MW-1	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133002	GW-075034-031814-CK-MW-2	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133003	GW-075034-031814-CK-MW-3	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133004	GW-075034-031814-CK-MW-4	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133005	GW-075034-031814-CK-MW-5	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133006	GW-075034-031814-CK-MW-6	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133007	GW-075034-031814-CK-MW-7	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165133010	GW-075034-031814-CK-MW-8R	EPA 3010	MPRP/26561	EPA 6010	ICP/20212
60165122001	GW-075034-031814-CK-MW-1	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122002	GW-075034-031814-CK-MW-2	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122003	GW-075034-031814-CK-MW-3	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122004	GW-075034-031814-CK-MW-4	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122005	GW-075034-031814-CK-MW-5	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122006	GW-075034-031814-CK-MW-6	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122007	GW-075034-031814-CK-MW-7	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165122008	GW-075034-031814-CK-MW-8R	SM 9215B	MBIO/12730	SM 9215B	MBIO/12731
60165133001	GW-075034-031814-CK-MW-1	EPA 8260	MSV/60323		
60165133002	GW-075034-031814-CK-MW-2	EPA 8260	MSV/60323		
60165133003	GW-075034-031814-CK-MW-3	EPA 8260	MSV/60323		
60165133004	GW-075034-031814-CK-MW-4	EPA 8260	MSV/60323		
60165133005	GW-075034-031814-CK-MW-5	EPA 8260	MSV/60323		
60165133006	GW-075034-031814-CK-MW-6	EPA 8260	MSV/60323		
60165133007	GW-075034-031814-CK-MW-7	EPA 8260	MSV/60323		
60165133008	GW-075034-031814-CK-DUP	EPA 8260	MSV/60323		
60165133009	GW-075034-031814-CK-1	EPA 8260	MSV/60323		
60165133010	GW-075034-031814-CK-MW-8R	EPA 8260	MSV/60408		
60165133010	GW-075034-031814-CK-MW-8R	EPA 8260	MSV/60459		
60165133001	GW-075034-031814-CK-MW-1	SM 2540C	WET/46832		
60165133002	GW-075034-031814-CK-MW-2	SM 2540C	WET/46832		
60165133003	GW-075034-031814-CK-MW-3	SM 2540C	WET/46832		
60165133004	GW-075034-031814-CK-MW-4	SM 2540C	WET/46869		
60165133005	GW-075034-031814-CK-MW-5	SM 2540C	WET/46869		
60165133006	GW-075034-031814-CK-MW-6	SM 2540C	WET/46869		
60165133007	GW-075034-031814-CK-MW-7	SM 2540C	WET/46869		
60165133010	GW-075034-031814-CK-MW-8R	SM 2540C	WET/46869		
60165133001	GW-075034-031814-CK-MW-1	EPA 300.0	WETA/28817		
60165133002	GW-075034-031814-CK-MW-2	EPA 300.0	WETA/28817		
60165133003	GW-075034-031814-CK-MW-3	EPA 300.0	WETA/28817		
60165133004	GW-075034-031814-CK-MW-4	EPA 300.0	WETA/28817		
60165133005	GW-075034-031814-CK-MW-5	EPA 300.0	WETA/28817		
60165133006	GW-075034-031814-CK-MW-6	EPA 300.0	WETA/28817		
60165133007	GW-075034-031814-CK-MW-7	EPA 300.0	WETA/28817		
60165133010	GW-075034-031814-CK-MW-8R	EPA 300.0	WETA/28817		
60165133001	GW-075034-031814-CK-MW-1	EPA 353.2	WETA/28673		
60165133002	GW-075034-031814-CK-MW-2	EPA 353.2	WETA/28673		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60165133

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60165133003	GW-075034-031814-CK-MW-3	EPA 353.2	WETA/28673		
60165133004	GW-075034-031814-CK-MW-4	EPA 353.2	WETA/28673		
60165133005	GW-075034-031814-CK-MW-5	EPA 353.2	WETA/28673		
60165133006	GW-075034-031814-CK-MW-6	EPA 353.2	WETA/28673		
60165133007	GW-075034-031814-CK-MW-7	EPA 353.2	WETA/28673		
60165133010	GW-075034-031814-CK-MW-8R	EPA 353.2	WETA/28673		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt  
ESI Tech Spec Client**

**WO# : 60165133**  
  
 60165133

Client Name: COP CRANM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 568912014717, 4720 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other 22P1C

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.6/0.8

(circle one)

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents:
-------------------------------------------------

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>NO3</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Includes date/time/ID/analyses Matrix:	<u>WT</u>	15.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	17.
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>0224M-3</u>		18.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	19.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	20. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: APF

Date: 3/19/14

<b>Temp Log:</b> Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1045</u>	Start:
End: <u>1055</u>	End:
Temp:	Temp:

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information:  
 Company: COP CRA NM  
 Address: 6121 Indian School Rd NE, Ste 200  
 Albuquerque, NM 87110  
 Email To: cmathews@craworld.com  
 Phone: (505)884-0672 Fax: (505)884-4932  
 Requested Due Date/TAT: standard

**Section B** Required Project Information:  
 Report To: Christine Mathews  
 Copy To: Jeff Walker, Angela Bown  
 Purchase Order No.: 4517653460  
 Project Name: San Juan 29-7 Unit 37  
 Project Number: 075034-95

**Section C** Invoice Information:  
 Attention: ePayables  
 Company Name:  
 Address:  
 Pace Quote Reference:  
 Pace Project Manager: Alice Flanagan  
 Pace Profile #: 5514, 24

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location STATE: NM

Page: 1 of 1

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	SAMPLE ID (A-Z, 0-9 / . -) Sample IDs MUST BE UNIQUE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB				DATE	TIME	DATE	TIME	UNPRESERVED	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>			
1		6W-075034-031814-CK-MW-1			G	WT G	6										3D144H 2-0131A 1180315 041
2		6W-075034-031814-CK-MW-2			G	WT G	6										
3		6W-075034-031814-CK-MW-3			G	WT G	6										
4		6W-075034-031814-CK-MW-4			G	WT G	6										
5		6W-075034-031814-CK-MW-5			G	WT G	6										
6		6W-075034-031814-CK-MW-6			G	WT G	6										
7		6W-075034-031814-CK-MW-7			G	WT G	6										
8		6W-075034-031814-CK-MW-8R			G	WT G	6										
9		6W-075034-031814-CK-DUP			G	WT G	3										
10		TB-075034-031814-CK-1			G	WT G	3										
11																	
12																	

**ADDITIONAL COMMENTS**  
 \* ALL SAMPLE TIMES IN MOUNTAIN TIME \*  
 \* TWO COOLERS \*

**RELINQUISHED BY / AFFILIATION** DATE TIME  
 [Signature] / CRA 3/18/14 14:00

**ACCEPTED BY / AFFILIATION** DATE TIME  
 [Signature] / PSE 3/19/14 0830

Temp in °C: 2.6  
 Received on Ice (Y/N):  
 Custody Sealed (Y/N):  
 Samples Intact (Y/N):

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: CALE KIRKACK  
 SIGNATURE of SAMPLER: [Signature]  
 DATE Signed (MM/DD/YYYY): 3/18/14

**Sample Condition Upon Receipt**

WO#: 60165122



60165122

Client Name: COP CRAMM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T2L13 Type of Ice: Wet Blue  None  Samples received on ice cooling process has begun (circle one)

Cooler Temperature: \_\_\_\_\_

Date and initials of person examining contents: 3/19/14 SM 945

Temperature should be above freezing to 6°C

Chain of Custody present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved SO <sub>4</sub> SA soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix		13.
All containers needing preservation have been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, uniform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased)		15.
Headspace in VOA vials (>6mm)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State

Client Notification/ Resolution: \_\_\_\_\_ Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AAF Date: 3/24/14



July 02, 2014

Christine Matthews  
CRA  
6121 Indian School Rd NE  
Suite 200  
Albuquerque, NM 87110

RE: Project: 075034 SAN JUAN 29-7 UNIT 37  
Pace Project No.: 60171658

Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on June 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa  
Jeff Walker, COP Conestoga-Rovers & Associa



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60171658001	GW-075034-061614-CK-MW-1	Water	06/16/14 14:45	06/18/14 08:20
60171658002	GW-075034-061614-CK-MW-2	Water	06/16/14 17:15	06/18/14 08:20
60171658003	GW-075034-061614-CK-MW-3	Water	06/16/14 17:00	06/18/14 08:20
60171658004	GW-075034-061614-CK-MW-4	Water	06/16/14 13:25	06/18/14 08:20
60171658005	GW-075034-061614-CK-MW-5	Water	06/16/14 15:15	06/18/14 08:20
60171658006	GW-075034-061614-CK-MW-6	Water	06/16/14 17:40	06/18/14 08:20
60171658007	GW-075034-061614-CK-MW-7	Water	06/16/14 14:20	06/18/14 08:20
60171658008	GW-075034-061614-CK-MW-8R	Water	06/16/14 18:10	06/18/14 08:20
60171658009	GW-075034-061614-CK-DUP	Water	06/16/14 08:00	06/18/14 08:20
60171658010	TRIP BLANK	Water	06/16/14 19:00	06/18/14 08:20

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60171658001	GW-075034-061614-CK-MW-1	EPA 6010	JGP	2
		SM 2540C	ESM	1
		EPA 300.0	OL	1
		EPA 353.2	JML	1
60171658002	GW-075034-061614-CK-MW-2	EPA 6010	JGP	2
		EPA 8260	PRG	8
		SM 2540C	ESM	1
		EPA 300.0	OL	1
60171658003	GW-075034-061614-CK-MW-3	EPA 353.2	JML	1
		EPA 6010	JGP	2
		EPA 8260	PRG	8
		SM 2540C	ESM	1
60171658004	GW-075034-061614-CK-MW-4	EPA 300.0	OL	1
		EPA 6010	JGP	2
		SM 2540C	ESM	1
		EPA 353.2	JML	1
60171658005	GW-075034-061614-CK-MW-5	EPA 6010	JGP	2
		EPA 8260	PRG	8
		SM 2540C	ESM	1
		EPA 300.0	OL	1
60171658006	GW-075034-061614-CK-MW-6	EPA 353.2	JML	1
		EPA 6010	JGP	2
		EPA 8260	PRG	8
		SM 2540C	ESM	1
60171658007	GW-075034-061614-CK-MW-7	EPA 300.0	OL	1
		EPA 6010	JGP	2
		SM 2540C	ESM	1
		EPA 353.2	JML	1
60171658008	GW-075034-061614-CK-MW-8R	EPA 6010	JGP	2
		EPA 8260	PRG, RAB	8
		SM 2540C	ESM	1
		EPA 300.0	OL	1
		EPA 353.2	JML	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60171658009	GW-075034-061614-CK-DUP	EPA 8260	JTS	8
60171658010	TRIP BLANK	EPA 8260	JTS	8

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** July 02, 2014

**General Information:**

8 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

**Method:** EPA 8260

**Description:** 8260 MSV UST, Water

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** July 02, 2014

**General Information:**

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- TRIP BLANK (Lab ID: 60171658010)

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/62569

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/62581

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/62625

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/62652

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** July 02, 2014

**General Information:**

8 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** July 02, 2014

**General Information:**

8 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/30023

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60171936001,60171936002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1402018)
- Sulfate

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

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**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** July 02, 2014

**General Information:**

8 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/29872

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60171658004,60171689001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1396268)
- Nitrogen, Nitrate

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-1      **Lab ID:** 60171658001      Collected: 06/16/14 14:45      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	1.2	mg/L	0.0050	1	06/19/14 18:40	06/20/14 10:25	7439-96-5	
Selenium, Dissolved	ND	mg/L	0.015	1	06/19/14 18:40	06/20/14 10:25	7782-49-2	
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C							
Total Dissolved Solids	2300	mg/L	5.0	1		06/23/14 09:55		
<b>300.0 IC Anions 28 Days</b>	Analytical Method: EPA 300.0							
Sulfate	1380	mg/L	200	200		06/29/14 23:55	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	5.7	mg/L	0.20	2		06/18/14 12:59		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-2      **Lab ID:** 60171658002      Collected: 06/16/14 17:15      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>0.090</b>	mg/L	0.0050	1	06/19/14 18:40	06/20/14 10:39	7439-96-5	
Selenium, Dissolved	<b>0.073</b>	mg/L	0.015	1	06/19/14 18:40	06/20/14 10:39	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/27/14 06:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/14 06:28	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/14 06:28	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/27/14 06:28	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	95 %		80-120	1		06/27/14 06:28	2037-26-5	
4-Bromofluorobenzene (S)	97 %		80-120	1		06/27/14 06:28	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-120	1		06/27/14 06:28	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		06/27/14 06:28		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2360</b>	mg/L	5.0	1		06/23/14 09:56		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1280</b>	mg/L	200	200		07/01/14 12:48	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>22.2</b>	mg/L	0.50	5		06/18/14 13:29		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-3      **Lab ID:** 60171658003      Collected: 06/16/14 17:00      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>2.0</b>	mg/L	0.0050	1	06/19/14 18:40	06/20/14 10:49	7439-96-5	
Selenium, Dissolved	<b>0.024</b>	mg/L	0.015	1	06/19/14 18:40	06/20/14 10:49	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/27/14 06:42	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/14 06:42	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/14 06:42	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/27/14 06:42	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		80-120	1		06/27/14 06:42	2037-26-5	
4-Bromofluorobenzene (S)	96 %		80-120	1		06/27/14 06:42	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		80-120	1		06/27/14 06:42	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		06/27/14 06:42		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>1990</b>	mg/L	5.0	1		06/23/14 09:56		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1130</b>	mg/L	100	100		07/01/14 13:03	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>8.8</b>	mg/L	0.20	2		06/18/14 13:20		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-4      **Lab ID:** 60171658004      Collected: 06/16/14 13:25      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	<b>0.0080</b>	mg/L	0.0050	1	06/19/14 18:40	06/20/14 10:52	7439-96-5	
Selenium, Dissolved	<b>0.034</b>	mg/L	0.015	1	06/19/14 18:40	06/20/14 10:52	7782-49-2	
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C							
Total Dissolved Solids	<b>1950</b>	mg/L	5.0	1		06/23/14 09:56		
<b>300.0 IC Anions 28 Days</b>	Analytical Method: EPA 300.0							
Sulfate	<b>1240</b>	mg/L	200	200		07/01/14 13:17	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	<b>6.5</b>	mg/L	0.20	2		06/18/14 13:10		M1

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### ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-5      **Lab ID:** 60171658005      Collected: 06/16/14 15:15      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>0.93</b>	mg/L	0.0050	1	06/19/14 18:40	06/20/14 10:56	7439-96-5	
Selenium, Dissolved	ND	mg/L	0.015	1	06/19/14 18:40	06/20/14 10:56	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/27/14 06:56	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/14 06:56	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/14 06:56	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/27/14 06:56	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100 %		80-120	1		06/27/14 06:56	2037-26-5	
4-Bromofluorobenzene (S)	94 %		80-120	1		06/27/14 06:56	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		80-120	1		06/27/14 06:56	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		06/27/14 06:56		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2320</b>	mg/L	5.0	1		06/23/14 09:56		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1730</b>	mg/L	200	200		07/01/14 14:50	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>0.17</b>	mg/L	0.10	1		06/18/14 13:21		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-6      **Lab ID:** 60171658006      Collected: 06/16/14 17:40      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	0.14	mg/L	0.0050	1	06/19/14 18:40	06/20/14 11:00	7439-96-5	
Selenium, Dissolved	0.036	mg/L	0.015	1	06/19/14 18:40	06/20/14 11:00	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		06/27/14 07:10	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/14 07:10	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/14 07:10	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/27/14 07:10	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	99	%	80-120	1		06/27/14 07:10	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	1		06/27/14 07:10	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	80-120	1		06/27/14 07:10	17060-07-0	
Preservation pH	1.0		1.0	1		06/27/14 07:10		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	1780	mg/L	5.0	1		06/23/14 09:57		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	955	mg/L	100	100		07/01/14 15:04	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	4.6	mg/L	0.20	2		06/18/14 13:05		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-7      **Lab ID:** 60171658007      Collected: 06/16/14 14:20      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Manganese, Dissolved	<b>0.49</b>	mg/L	0.0050	1	06/19/14 18:40	06/20/14 11:03	7439-96-5	
Selenium, Dissolved	ND	mg/L	0.015	1	06/19/14 18:40	06/20/14 11:03	7782-49-2	
<b>2540C Total Dissolved Solids</b>	Analytical Method: SM 2540C							
Total Dissolved Solids	<b>2940</b>	mg/L	5.0	1		06/23/14 09:57		
<b>300.0 IC Anions 28 Days</b>	Analytical Method: EPA 300.0							
Sulfate	<b>1930</b>	mg/L	200	200		07/01/14 15:19	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	<b>2.7</b>	mg/L	0.20	2		06/18/14 12:58		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-MW-8R      **Lab ID:** 60171658008      Collected: 06/16/14 18:10      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	1.5	mg/L	0.0050	1	06/19/14 18:40	06/20/14 11:07	7439-96-5	
Selenium, Dissolved	ND	mg/L	0.015	1	06/19/14 18:40	06/20/14 11:07	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	319	ug/L	5.0	5		06/28/14 19:11	71-43-2	
Ethylbenzene	30.5	ug/L	1.0	1		06/27/14 07:25	100-41-4	
Toluene	846	ug/L	5.0	5		06/28/14 19:11	108-88-3	
Xylene (Total)	505	ug/L	3.0	1		06/27/14 07:25	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	97	%	80-120	1		06/27/14 07:25	2037-26-5	
4-Bromofluorobenzene (S)	96	%	80-120	1		06/27/14 07:25	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	80-120	1		06/27/14 07:25	17060-07-0	
Preservation pH	1.0		1.0	1		06/27/14 07:25		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2330	mg/L	5.0	1		06/23/14 09:57		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1510	mg/L	200	200		07/01/14 15:33	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	4.4	mg/L	0.20	2		06/18/14 13:30		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

**Sample:** GW-075034-061614-CK-DUP      **Lab ID:** 60171658009      Collected: 06/16/14 08:00      Received: 06/18/14 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	291	ug/L	20.0	20		06/27/14 14:56	71-43-2	
Ethylbenzene	29.6	ug/L	1.0	1		06/26/14 04:21	100-41-4	
Toluene	816	ug/L	20.0	20		06/27/14 14:56	108-88-3	
Xylene (Total)	642	ug/L	60.0	20		06/27/14 14:56	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	110	%	80-120	1		06/26/14 04:21	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		06/26/14 04:21	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120	1		06/26/14 04:21	17060-07-0	
Preservation pH	1.0		1.0	1		06/26/14 04:21		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

<b>Sample: TRIP BLANK</b>		<b>Lab ID: 60171658010</b>	Collected: 06/16/14 19:00	Received: 06/18/14 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		06/27/14 13:51	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/27/14 13:51	100-41-4	
Toluene	ND ug/L		1.0	1		06/27/14 13:51	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/27/14 13:51	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100 %		80-120	1		06/27/14 13:51	2037-26-5	
4-Bromofluorobenzene (S)	100 %		80-120	1		06/27/14 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-120	1		06/27/14 13:51	17060-07-0	
Preservation pH	<b>6.0</b>		1.0	1		06/27/14 13:51		pH

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

QC Batch: MPRP/27707 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60171658001, 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008

METHOD BLANK: 1397030 Matrix: Water  
 Associated Lab Samples: 60171658001, 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	06/20/14 10:08	
Selenium, Dissolved	mg/L	ND	0.015	06/20/14 10:08	

LABORATORY CONTROL SAMPLE: 1397031

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	0.95	95	80-120	
Selenium, Dissolved	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1397032 1397033

Parameter	Units	60171658001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Manganese, Dissolved	mg/L	1.2	1	1	2.1	2.1	92	92	75-125	0	20		
Selenium, Dissolved	mg/L	ND	1	1	0.99	0.98	98	97	75-125	1	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

QC Batch: MSV/62581

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60171658009

METHOD BLANK: 1400909

Matrix: Water

Associated Lab Samples: 60171658009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	06/26/14 01:52	
1,2-Dichloroethane-d4 (S)	%	101	80-120	06/26/14 01:52	
4-Bromofluorobenzene (S)	%	100	80-120	06/26/14 01:52	
Toluene-d8 (S)	%	108	80-120	06/26/14 01:52	

LABORATORY CONTROL SAMPLE: 1400910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	18.9	94	80-121	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			104	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

QC Batch:	MSV/62625	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	60171658008		

---

METHOD BLANK: 1401962 Matrix: Water

Associated Lab Samples: 60171658008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/28/14 14:18	
Toluene	ug/L	ND	1.0	06/28/14 14:18	
1,2-Dichloroethane-d4 (S)	%	87	80-120	06/28/14 14:18	
4-Bromofluorobenzene (S)	%	97	80-120	06/28/14 14:18	
Toluene-d8 (S)	%	110	80-120	06/28/14 14:18	

---

LABORATORY CONTROL SAMPLE: 1401963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.1	100	80-120	
Toluene	ug/L	20	21.2	106	80-122	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			105	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

QC Batch: MSV/62652

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60171658009, 60171658010

METHOD BLANK: 1402431

Matrix: Water

Associated Lab Samples: 60171658009, 60171658010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/27/14 13:35	
Ethylbenzene	ug/L	ND	1.0	06/27/14 13:35	
Toluene	ug/L	ND	1.0	06/27/14 13:35	
Xylene (Total)	ug/L	ND	3.0	06/27/14 13:35	
1,2-Dichloroethane-d4 (S)	%	97	80-120	06/27/14 13:35	
4-Bromofluorobenzene (S)	%	100	80-120	06/27/14 13:35	
Toluene-d8 (S)	%	101	80-120	06/27/14 13:35	

LABORATORY CONTROL SAMPLE: 1402432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.8	99	80-120	
Ethylbenzene	ug/L	20	19.6	98	80-121	
Toluene	ug/L	20	18.8	94	80-122	
Xylene (Total)	ug/L	60	59.1	99	80-121	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

QC Batch: WETA/30023

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60171658001, 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008

METHOD BLANK: 1402016

Matrix: Water

Associated Lab Samples: 60171658001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	06/29/14 13:50	

METHOD BLANK: 1404324

Matrix: Water

Associated Lab Samples: 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	07/01/14 09:12	

LABORATORY CONTROL SAMPLE: 1402017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 1404325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1402018 1402019

Parameter	Units	60171936001		60171936002		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Sulfate	mg/L	18900	5000	5000	25200	24800	125	117	80-120	2	15 M1	

MATRIX SPIKE SAMPLE: 1402020

Parameter	Units	60171936002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	22100	10000	32800	107	80-120	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

QC Batch:	WETA/29872	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples:	60171658001, 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008		

METHOD BLANK:	1396266	Matrix:	Water
Associated Lab Samples:	60171658001, 60171658002, 60171658003, 60171658004, 60171658005, 60171658006, 60171658007, 60171658008		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	06/18/14 12:54	

LABORATORY CONTROL SAMPLE: 1396267						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	103	85-115	

MATRIX SPIKE SAMPLE: 1396268							
Parameter	Units	60171658004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	6.5	3.2	8.8	73	85-115	M1

MATRIX SPIKE SAMPLE: 1396270							
Parameter	Units	60171689001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.62	1.6	2.1	95	85-115	

SAMPLE DUPLICATE: 1396269						
Parameter	Units	60171658001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	5.7	5.7	0	20	

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/62569

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/62581

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/62625

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/62652

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60171658

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60171658001	GW-075034-061614-CK-MW-1	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658002	GW-075034-061614-CK-MW-2	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658003	GW-075034-061614-CK-MW-3	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658004	GW-075034-061614-CK-MW-4	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658005	GW-075034-061614-CK-MW-5	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658006	GW-075034-061614-CK-MW-6	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658007	GW-075034-061614-CK-MW-7	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658008	GW-075034-061614-CK-MW-8R	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171658002	GW-075034-061614-CK-MW-2	EPA 8260	MSV/62569		
60171658003	GW-075034-061614-CK-MW-3	EPA 8260	MSV/62569		
60171658005	GW-075034-061614-CK-MW-5	EPA 8260	MSV/62569		
60171658006	GW-075034-061614-CK-MW-6	EPA 8260	MSV/62569		
60171658008	GW-075034-061614-CK-MW-8R	EPA 8260	MSV/62569		
60171658008	GW-075034-061614-CK-MW-8R	EPA 8260	MSV/62625		
60171658009	GW-075034-061614-CK-DUP	EPA 8260	MSV/62581		
60171658009	GW-075034-061614-CK-DUP	EPA 8260	MSV/62652		
60171658010	TRIP BLANK	EPA 8260	MSV/62652		
60171658001	GW-075034-061614-CK-MW-1	SM 2540C	WET/48609		
60171658002	GW-075034-061614-CK-MW-2	SM 2540C	WET/48609		
60171658003	GW-075034-061614-CK-MW-3	SM 2540C	WET/48609		
60171658004	GW-075034-061614-CK-MW-4	SM 2540C	WET/48609		
60171658005	GW-075034-061614-CK-MW-5	SM 2540C	WET/48609		
60171658006	GW-075034-061614-CK-MW-6	SM 2540C	WET/48609		
60171658007	GW-075034-061614-CK-MW-7	SM 2540C	WET/48609		
60171658008	GW-075034-061614-CK-MW-8R	SM 2540C	WET/48609		
60171658001	GW-075034-061614-CK-MW-1	EPA 300.0	WETA/30023		
60171658002	GW-075034-061614-CK-MW-2	EPA 300.0	WETA/30023		
60171658003	GW-075034-061614-CK-MW-3	EPA 300.0	WETA/30023		
60171658004	GW-075034-061614-CK-MW-4	EPA 300.0	WETA/30023		
60171658005	GW-075034-061614-CK-MW-5	EPA 300.0	WETA/30023		
60171658006	GW-075034-061614-CK-MW-6	EPA 300.0	WETA/30023		
60171658007	GW-075034-061614-CK-MW-7	EPA 300.0	WETA/30023		
60171658008	GW-075034-061614-CK-MW-8R	EPA 300.0	WETA/30023		
60171658001	GW-075034-061614-CK-MW-1	EPA 353.2	WETA/29872		
60171658002	GW-075034-061614-CK-MW-2	EPA 353.2	WETA/29872		
60171658003	GW-075034-061614-CK-MW-3	EPA 353.2	WETA/29872		
60171658004	GW-075034-061614-CK-MW-4	EPA 353.2	WETA/29872		
60171658005	GW-075034-061614-CK-MW-5	EPA 353.2	WETA/29872		
60171658006	GW-075034-061614-CK-MW-6	EPA 353.2	WETA/29872		
60171658007	GW-075034-061614-CK-MW-7	EPA 353.2	WETA/29872		
60171658008	GW-075034-061614-CK-MW-8R	EPA 353.2	WETA/29872		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt  
ESI Tech Spec Client**

**WO# : 60171658**



60171658

Client Name: CD CNA NM

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 560912851480 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIC

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.8

Date and initials of person examining contents: pu 6/18/14

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>NB</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>COVER</u>		<u>Received on 6/18/14 for TB, TB is not pace container.</u>
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: ME Date: 6/18/14

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>0910</u>	Start:
End: <u>0914</u>	End:
Temp:	Temp:



The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: Company: COP CRA NM  
 Address: 6121 Indian School Rd NE, Ste 200 Albuquerque, NM 87110  
 Email To: gmathews@croworld.com  
 Phone: (505)884-0672 Fax: (505)884-4932  
 Requested Due Date/TAT: standard

**Section B** Required Project Information: Report To: Christine Mathews  
 Copy To: Jeff Walker, Angela Bown  
 Purchase Order No.: 4517653460  
 Project Name: San Juan 29-7 Unit 37  
 Project Number: 075034-95

**Section C** Invoice Information: Attention: ePayables  
 Company Name: Pace Analytical  
 Address: 6121 Indian School Rd NE, Ste 200 Albuquerque, NM 87110  
 Pace Quote Reference: Alice Flanagan  
 Pace Project Manager: Alice Flanagan  
 Pace Profile #: 5514, 24

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location: NM STATE: NM

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW PRODUCT P SOILSOLID SL OIL OL WIPE WIP AIR AR OTHER OT TISSUE TS	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		COMPOSITE START	COMPOSITE END/GRAB									
1	SW-075034-010101A.CK. MW-1			WT G	WT G	Christine Mathews	6/17/14	1445		6/18/14	0820	Y
2	SW-075034-010101A.CK. MW-2			WT G	WT G	Christine Mathews	6/17/14	1715		6/18/14	0820	Y
3	SW-075034-010101A.CK. MW-3			WT G	WT G	Christine Mathews	6/17/14	1700		6/18/14	0820	Y
4	SW-075034-010101A.CK. MW-4			WT G	WT G	Christine Mathews	6/17/14	1515		6/18/14	0820	Y
5	SW-075034-010101A.CK. MW-5			WT G	WT G	Christine Mathews	6/17/14	1740		6/18/14	0820	Y
6	SW-075034-010101A.CK. MW-6			WT G	WT G	Christine Mathews	6/17/14	1420		6/18/14	0820	Y
7	SW-075034-010101A.CK. MW-7			WT G	WT G	Christine Mathews	6/17/14	1810		6/18/14	0820	Y
8	SW-075034-010101A.CK. MW-8R			WT G	WT G	Christine Mathews	6/17/14	1900		6/18/14	0820	Y
9	SW-075034-010101A.CK. dup			WT G	WT G	Christine Mathews	6/17/14	1900		6/18/14	0820	Y
10	TRIP BANK			WT G	WT G	Christine Mathews	6/17/14	1900		6/18/14	0820	Y
11												
12												

**ADDITIONAL COMMENTS**  
 Note MW-1 MW-4 and MW-7 NO BTEX ANALYSIS NO HPLC on all

**Requested Analysis Filtered (Y/N)**  
 Residual Chlorine (Y/N) 00171658  
 Pace Project No./ Lab I.D. 28P3U 1B3F 1-5 61

**Temp in °C**  
 Received on Ice (Y/N)  
 Custody Sealed (Y/N)  
 Samples Intact (Y/N)

**SAMPLER NAME AND SIGNATURE:**  
 PRINT Name of SAMPLER: Cassie Brown  
 SIGNATURE of SAMPLER: Cassie Brown  
 DATE Signed (MM/DD/YY): 6/17/14

October 10, 2014

Christine Mathews  
CRA  
6121 Indian School Rd NE  
Suite 200  
Albuquerque, NM 87110

RE: Project: 075034 San Juan 29-7 Unit 37  
Pace Project No.: 60178288

Dear Christine Mathews:

Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa  
Chris Fetters, COP Conestoga-Rovers & Associa  
Jeff Walker, COP Conestoga-Rovers & Associa



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60178288001	GW-075034-091614-CB-MW-5	Water	09/16/14 09:55	09/18/14 08:25
60178288002	GW-075034-091614-CB-MW-6	Water	09/16/14 11:10	09/18/14 08:25
60178288003	GW-075034-091614-CB-MW-2	Water	09/16/14 13:15	09/18/14 08:25
60178288004	GW-075034-091614-CB-MW-3	Water	09/16/14 13:55	09/18/14 08:25
60178288005	Trip Blank	Water	09/17/14 15:30	09/18/14 08:25
60178288006	Trip Blank	Water	09/17/14 15:30	09/18/14 08:25

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60178288001	GW-075034-091614-CB-MW-5	EPA 6010	NDJ	2
		EPA 8260	EAK	8
		SM 2540C	MER	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178288002	GW-075034-091614-CB-MW-6	EPA 6010	NDJ	2
		EPA 8260	EAK	8
		SM 2540C	MER	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178288003	GW-075034-091614-CB-MW-2	EPA 6010	NDJ	2
		EPA 8260	EAK	8
		SM 2540C	MER	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178288004	GW-075034-091614-CB-MW-3	EPA 6010	NDJ	2
		EPA 8260	EAK	8
		SM 2540C	MER	1
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178288005	Trip Blank	EPA 8260	EAK	8

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## PROJECT NARRATIVE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/28997

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60178343001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1446137)
  - Selenium, Dissolved
- MSD (Lab ID: 1446138)
  - Selenium, Dissolved

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

---

**Method:** EPA 8260

**Description:** 8260 MSV UST, Water

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2014

**General Information:**

5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/64519

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

H5: Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.

- GW-075034-091614-CB-MW-5 (Lab ID: 60178288001)

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: WET/50432

1e: Residue exceeded method limit of 0.2g

- GW-075034-091614-CB-MW-5 (Lab ID: 60178288001)
  - Total Dissolved Solids

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## PROJECT NARRATIVE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.

- GW-075034-091614-CB-MW-2 (Lab ID: 60178288003)
- GW-075034-091614-CB-MW-3 (Lab ID: 60178288004)
- GW-075034-091614-CB-MW-5 (Lab ID: 60178288001)
- GW-075034-091614-CB-MW-6 (Lab ID: 60178288002)

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

**Sample:** GW-075034-091614-CB-MW-5      **Lab ID:** 60178288001      Collected: 09/16/14 09:55      Received: 09/18/14 08:25      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	433	ug/L	5.0	1	09/20/14 11:50	10/01/14 15:38	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	09/20/14 11:50	10/01/14 15:38	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		09/20/14 04:41	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/20/14 04:41	100-41-4	
Toluene	ND	ug/L	1.0	1		09/20/14 04:41	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/20/14 04:41	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		09/20/14 04:41	2037-26-5	
4-Bromofluorobenzene (S)	92	%	80-120	1		09/20/14 04:41	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		09/20/14 04:41	17060-07-0	
Preservation pH	1.0		1.0	1		09/20/14 04:41		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2850	mg/L	5.0	1		09/23/14 12:09		1e
Total Dissolved Solids	2770	mg/L	5.0	1		09/25/14 13:49		H5
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1490	mg/L	200	200		09/30/14 20:32	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	0.14	mg/L	0.10	1		09/19/14 08:49		H1

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

**Sample:** GW-075034-091614-CB-MW-6      **Lab ID:** 60178288002      Collected: 09/16/14 11:10      Received: 09/18/14 08:25      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	115	ug/L	5.0	1	09/20/14 11:50	10/01/14 15:41	7439-96-5	
Selenium, Dissolved	38.6	ug/L	15.0	1	09/20/14 11:50	10/01/14 15:41	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		09/20/14 04:56	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/20/14 04:56	100-41-4	
Toluene	ND	ug/L	1.0	1		09/20/14 04:56	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/20/14 04:56	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1		09/20/14 04:56	2037-26-5	
4-Bromofluorobenzene (S)	92	%	80-120	1		09/20/14 04:56	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		09/20/14 04:56	17060-07-0	
Preservation pH	1.0		1.0	1		09/20/14 04:56		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	1930	mg/L	5.0	1		09/23/14 12:09		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	846	mg/L	100	100		09/30/14 20:46	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	23.2	mg/L	1.0	10		09/19/14 09:22		H1

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## ANALYTICAL RESULTS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

**Sample:** GW-075034-091614-CB-MW-2      **Lab ID:** 60178288003      Collected: 09/16/14 13:15      Received: 09/18/14 08:25      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>783</b>	ug/L	5.0	1	09/20/14 11:50	10/01/14 15:45	7439-96-5	
Selenium, Dissolved	<b>73.4</b>	ug/L	15.0	1	09/20/14 11:50	10/01/14 15:45	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		09/20/14 05:12	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/20/14 05:12	100-41-4	
Toluene	ND	ug/L	1.0	1		09/20/14 05:12	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/20/14 05:12	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100 %		80-120	1		09/20/14 05:12	2037-26-5	
4-Bromofluorobenzene (S)	91 %		80-120	1		09/20/14 05:12	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		80-120	1		09/20/14 05:12	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		09/20/14 05:12		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2440</b>	mg/L	5.0	1		09/23/14 12:09		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1140</b>	mg/L	100	100		09/30/14 21:31	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>34.0</b>	mg/L	1.0	10		09/19/14 09:23		H1

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## ANALYTICAL RESULTS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

**Sample:** GW-075034-091614-CB-MW-3      **Lab ID:** 60178288004      Collected: 09/16/14 13:55      Received: 09/18/14 08:25      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>2290</b>	ug/L	5.0	1	09/20/14 11:50	10/01/14 15:49	7439-96-5	
Selenium, Dissolved	<b>26.1</b>	ug/L	15.0	1	09/20/14 11:50	10/01/14 15:49	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		09/20/14 05:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/20/14 05:27	100-41-4	
Toluene	ND	ug/L	1.0	1		09/20/14 05:27	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/20/14 05:27	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		80-120	1		09/20/14 05:27	2037-26-5	
4-Bromofluorobenzene (S)	91 %		80-120	1		09/20/14 05:27	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-120	1		09/20/14 05:27	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		09/20/14 05:27		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2240</b>	mg/L	5.0	1		09/23/14 12:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1060</b>	mg/L	100	100		09/30/14 21:46	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>11.3</b>	mg/L	0.50	5		09/19/14 09:24		H1

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## ANALYTICAL RESULTS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

Sample: Trip Blank		Lab ID: 60178288005	Collected: 09/17/14 15:30	Received: 09/18/14 08:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		09/20/14 05:42	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		09/20/14 05:42	100-41-4	
Toluene	ND ug/L		1.0	1		09/20/14 05:42	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/20/14 05:42	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101 %		80-120	1		09/20/14 05:42	2037-26-5	
4-Bromofluorobenzene (S)	91 %		80-120	1		09/20/14 05:42	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		80-120	1		09/20/14 05:42	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		09/20/14 05:42		

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### QUALITY CONTROL DATA

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

QC Batch: MPRP/28997 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

METHOD BLANK: 1446135 Matrix: Water  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	10/01/14 14:15	
Selenium, Dissolved	ug/L	ND	15.0	10/01/14 14:15	

LABORATORY CONTROL SAMPLE: 1446136

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	1020	102	80-120	
Selenium, Dissolved	ug/L	1000	981	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446137 1446138

Parameter	Units	60178343001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Manganese, Dissolved	ug/L	196	1000	1430	1000	1370	123	117	75-125	4	20	
Selenium, Dissolved	ug/L	ND	1000	390	1000	402	37	38	75-125	3	20	M1

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### QUALITY CONTROL DATA

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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QC Batch: MSV/64519 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004, 60178288005

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METHOD BLANK: 1445977 Matrix: Water  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004, 60178288005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/20/14 00:03	
Ethylbenzene	ug/L	ND	1.0	09/20/14 00:03	
Toluene	ug/L	ND	1.0	09/20/14 00:03	
Xylene (Total)	ug/L	ND	3.0	09/20/14 00:03	
1,2-Dichloroethane-d4 (S)	%	98	80-120	09/20/14 00:03	
4-Bromofluorobenzene (S)	%	93	80-120	09/20/14 00:03	
Toluene-d8 (S)	%	100	80-120	09/20/14 00:03	

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LABORATORY CONTROL SAMPLE: 1445978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.8	94	80-120	
Ethylbenzene	ug/L	20	18.2	91	80-121	
Toluene	ug/L	20	19.7	98	80-122	
Xylene (Total)	ug/L	60	51.3	86	80-121	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			100	80-120	

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### QUALITY CONTROL DATA

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

QC Batch:	WET/50505	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	60178288001		

METHOD BLANK: 1449058 Matrix: Water

Associated Lab Samples: 60178288001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0	5.0	09/25/14 13:48	

LABORATORY CONTROL SAMPLE: 1449059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	977	98	80-120	

SAMPLE DUPLICATE: 1449060

Parameter	Units	60178288001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2770	2910	5	10	H1

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

QC Batch: WETA/31151 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

METHOD BLANK: 1450582 Matrix: Water  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	09/30/14 14:34	

LABORATORY CONTROL SAMPLE: 1450583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1450584 1450585

Parameter	Units	60178510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	1690	1000	1000	2560	2580	87	89	80-120	1	15	

MATRIX SPIKE SAMPLE: 1450586

Parameter	Units	60178510002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	1200	500	1680	94	80-120	

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### QUALITY CONTROL DATA

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

QC Batch: WETA/31065 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

METHOD BLANK: 1445647 Matrix: Water  
 Associated Lab Samples: 60178288001, 60178288002, 60178288003, 60178288004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	09/19/14 08:45	

LABORATORY CONTROL SAMPLE: 1445648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.5	94	85-115	

MATRIX SPIKE SAMPLE: 1445650

Parameter	Units	60178218003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1.6	1.7	104	85-115	

SAMPLE DUPLICATE: 1445649

Parameter	Units	60178347001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	22.7	21.6	5	20	

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## QUALIFIERS

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/64519

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

1e Residue exceeded method limit of 0.2g

H1 Analysis conducted outside the EPA method holding time.

H5 Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 San Juan 29-7 Unit 37

Pace Project No.: 60178288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60178288001	GW-075034-091614-CB-MW-5	EPA 3010	MPRP/28997	EPA 6010	ICP/21843
60178288002	GW-075034-091614-CB-MW-6	EPA 3010	MPRP/28997	EPA 6010	ICP/21843
60178288003	GW-075034-091614-CB-MW-2	EPA 3010	MPRP/28997	EPA 6010	ICP/21843
60178288004	GW-075034-091614-CB-MW-3	EPA 3010	MPRP/28997	EPA 6010	ICP/21843
60178288001	GW-075034-091614-CB-MW-5	EPA 8260	MSV/64519		
60178288002	GW-075034-091614-CB-MW-6	EPA 8260	MSV/64519		
60178288003	GW-075034-091614-CB-MW-2	EPA 8260	MSV/64519		
60178288004	GW-075034-091614-CB-MW-3	EPA 8260	MSV/64519		
60178288005	Trip Blank	EPA 8260	MSV/64519		
60178288001	GW-075034-091614-CB-MW-5	SM 2540C	WET/50432		
60178288001	GW-075034-091614-CB-MW-5	SM 2540C	WET/50505		
60178288002	GW-075034-091614-CB-MW-6	SM 2540C	WET/50432		
60178288003	GW-075034-091614-CB-MW-2	SM 2540C	WET/50432		
60178288004	GW-075034-091614-CB-MW-3	SM 2540C	WET/50432		
60178288001	GW-075034-091614-CB-MW-5	EPA 300.0	WETA/31151		
60178288002	GW-075034-091614-CB-MW-6	EPA 300.0	WETA/31151		
60178288003	GW-075034-091614-CB-MW-2	EPA 300.0	WETA/31151		
60178288004	GW-075034-091614-CB-MW-3	EPA 300.0	WETA/31151		
60178288001	GW-075034-091614-CB-MW-5	EPA 353.2	WETA/31065		
60178288002	GW-075034-091614-CB-MW-6	EPA 353.2	WETA/31065		
60178288003	GW-075034-091614-CB-MW-2	EPA 353.2	WETA/31065		
60178288004	GW-075034-091614-CB-MW-3	EPA 353.2	WETA/31065		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt  
ESI Tech Spec Client

WO#: 60178288  
60178288

Client Name: COR CRA NM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 6113 5279 9037 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.6

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: <u>JPS 9/18/14 1935</u>
-------------------------------------------------------------------------

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5. <u>NO3 expired</u>
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>NO3</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses	Matrix: <u>water</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>JPS</u> Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased):	<u>081014-3</u>	15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: APF

Date: 9/18/14

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1930</u>	Start:
End: <u>1935</u>	End:
Temp:	Temp:

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



<b>Section A</b> Required Client Information: Company: COP CRA NM Address: 6121 Indian School Rd NE, Ste 200 Albuquerque, NM 87110 Email To: cmathews@crowworld.com Phone: (505)884-0672 Fax: (505)884-4932 Requested Due Date/TAT: standard		<b>Section B</b> Required Project Information: Report To: Christine Mathews Copy To: Jeff Walker, Angela Bown Purchase Order No.: 4517653460 Project Name: San Juan 29-7 Unit 37 Project Number: 075034-95		<b>Section C</b> Invoice Information: Attention: ePayables Company Name: Address: Pace Quote Reference: Pace Project Manager: Alice Flanagan Pace Profile #: 5514, 24	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		Site Location STATE: NM			

Page: \_\_\_\_\_ of \_\_\_\_\_

ITEM #	Section D Required Client Information	Valid Matrix Codes	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB								
1	610-075034-091014-CB-MW-5	DRINKING WATER DW			G	lot 9	0		X			2182M (B35) 3(D94H) 001
2	610-075034-091014-CB-MW-2WTG	WATER WT			G	WTG	0		X			2182M (B35) 3(D94H) 002
3	610-075034-091014-CB-MW-2WTG	WASTE WATER WW			G	WTG	0		X			2182M (B35) 3(D94H) 003
4	610-075034-091014-CB-MW-2WTG	PRODUCT P			G	WTG	0		X			2182M (B35) 3(D94H) 004
5	TOP BLANK	SOL/SOLID SL			G	WTG	0		X			2182M (B35) 3(D94H) 005
6		OIL OL										
7		WIPE WP										
8		AIR AR										
9		OTHER OT										
10		TISSUE TS										
11												
12												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Metals have been field filtered	Cassie Bown / COP	9/16/14	1536	Michelle Bown / COP	9/16/14	825	Y Y Y

Temp in °C	Received on	Cooler (Y/N)	Samples Intact
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Cassie Bown SIGNATURE of SAMPLER: <i>Cassie Bown</i> DATE Signed (MM/DD/YYYY): 9/17/14			

October 10, 2014

Christine Matthews  
CRA  
6121 Indian School Rd NE  
Suite 200  
Albuquerque, NM 87110

RE: Project: 075034 SAN JUAN 29-7 UNIT 37  
Pace Project No.: 60178875

Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa  
Angela Bown, Conestoga Rovers & Associates  
Chris Fetters, COP Conestoga-Rovers & Associa  
Jeff Walker, COP Conestoga-Rovers & Associa



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60178875001	GW-075034-092514-CM-MW-1	Water	09/25/14 11:35	09/26/14 08:40
60178875002	GW-075034-092514-CM-MW-8R	Water	09/25/14 11:50	09/26/14 08:40
60178875003	GW-075034-092514-CM-MW-7	Water	09/25/14 13:40	09/26/14 08:40
60178875004	GW-075034-092514-CM-MW-4	Water	09/25/14 13:30	09/26/14 08:40
60178875005	GW-075034-092514-CM-DUP	Water	09/25/14 08:00	09/26/14 08:40
60178875006	TB-075034-092514-CM-001	Water	09/25/14 15:45	09/26/14 08:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60178875001	GW-075034-092514-CM-MW-1	EPA 6010	TDS	2
		EPA 8260	RAB	8
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178875002	GW-075034-092514-CM-MW-8R	EPA 6010	TDS	2
		EPA 8260	RAB	8
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178875003	GW-075034-092514-CM-MW-7	EPA 6010	TDS	2
		EPA 8260	RAB	8
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178875004	GW-075034-092514-CM-MW-4	EPA 6010	TDS	2
		EPA 8260	RAB	8
		EPA 300.0	OL	1
		EPA 353.2	AJM	1
60178875005	GW-075034-092514-CM-DUP	EPA 8260	RAB	8
60178875006	TB-075034-092514-CM-001	EPA 8260	EAK	8

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** CRA Conoco New Mexico

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

---

**Method:** EPA 8260

**Description:** 8260 MSV UST, Water

**Client:** CRA Conoco New Mexico

**Date:** October 10, 2014

**General Information:**

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/64773

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/64820

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

---

**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** CRA Conoco New Mexico

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

---

**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres

**Client:** CRA Conoco New Mexico

**Date:** October 10, 2014

**General Information:**

4 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

**Sample:** GW-075034-092514-CM-MW-1    **Lab ID:** 60178875001    Collected: 09/25/14 11:35    Received: 09/26/14 08:40    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	1570	ug/L	5.0	1	10/02/14 16:40	10/03/14 15:42	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	10/02/14 16:40	10/03/14 15:42	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/02/14 03:24	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/02/14 03:24	100-41-4	
Toluene	ND	ug/L	1.0	1		10/02/14 03:24	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/02/14 03:24	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		10/02/14 03:24	2037-26-5	
4-Bromofluorobenzene (S)	110	%	80-120	1		10/02/14 03:24	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		10/02/14 03:24	17060-07-0	
Preservation pH	1.0		1.0	1		10/02/14 03:24		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1690	mg/L	200	200		10/08/14 15:41	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	4.4	mg/L	0.20	2		09/26/14 16:49		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

**Sample:** GW-075034-092514-CM-MW-8R    **Lab ID:** 60178875002    Collected: 09/25/14 11:50    Received: 09/26/14 08:40    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	1380	ug/L	5.0	1	10/02/14 16:40	10/03/14 15:44	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	10/02/14 16:40	10/03/14 15:44	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	172	ug/L	1.0	1		10/02/14 03:39	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/02/14 03:39	100-41-4	
Toluene	2.2	ug/L	1.0	1		10/02/14 03:39	108-88-3	
Xylene (Total)	6.7	ug/L	3.0	1		10/02/14 03:39	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	95 %		80-120	1		10/02/14 03:39	2037-26-5	
4-Bromofluorobenzene (S)	97 %		80-120	1		10/02/14 03:39	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		80-120	1		10/02/14 03:39	17060-07-0	
Preservation pH	1.0		1.0	1		10/02/14 03:39		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1530	mg/L	200	200		10/08/14 15:57	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	6.6	mg/L	0.50	5		09/26/14 16:53		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

**Sample:** GW-075034-092514-CM-MW-7      **Lab ID:** 60178875003      Collected: 09/25/14 13:40      Received: 09/26/14 08:40      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	231	ug/L	5.0	1	10/02/14 16:40	10/03/14 15:47	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	10/02/14 16:40	10/03/14 15:47	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/02/14 03:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/02/14 03:55	100-41-4	
Toluene	ND	ug/L	1.0	1		10/02/14 03:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/02/14 03:55	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	103	%	80-120	1		10/02/14 03:55	2037-26-5	
4-Bromofluorobenzene (S)	97	%	80-120	1		10/02/14 03:55	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		10/02/14 03:55	17060-07-0	
Preservation pH	1.0		1.0	1		10/02/14 03:55		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1970	mg/L	200	200		10/08/14 16:12	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	29.7	mg/L	1.0	10		09/26/14 16:35		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

**Sample:** GW-075034-092514-CM-MW-4      **Lab ID:** 60178875004      Collected: 09/25/14 13:30      Received: 09/26/14 08:40      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	16.0	ug/L	5.0	1	10/02/14 16:40	10/03/14 15:49	7439-96-5	
Selenium, Dissolved	33.5	ug/L	15.0	1	10/02/14 16:40	10/03/14 15:49	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/02/14 04:10	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/02/14 04:10	100-41-4	
Toluene	ND	ug/L	1.0	1		10/02/14 04:10	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/02/14 04:10	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	97	%	80-120	1		10/02/14 04:10	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1		10/02/14 04:10	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	80-120	1		10/02/14 04:10	17060-07-0	
Preservation pH	1.0		1.0	1		10/02/14 04:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1260	mg/L	200	200		10/08/14 16:28	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	7.0	mg/L	0.50	5		09/26/14 16:54		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

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**Sample:** GW-075034-092514-CM-DUP    **Lab ID:** 60178875005    Collected: 09/25/14 08:00    Received: 09/26/14 08:40    Matrix: Water

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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	<b>182</b>	ug/L	1.0	1		10/02/14 04:26	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/02/14 04:26	100-41-4	
Toluene	<b>2.5</b>	ug/L	1.0	1		10/02/14 04:26	108-88-3	
Xylene (Total)	<b>6.8</b>	ug/L	3.0	1		10/02/14 04:26	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	80-120	1		10/02/14 04:26	2037-26-5	
4-Bromofluorobenzene (S)	97	%	80-120	1		10/02/14 04:26	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		10/02/14 04:26	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		10/02/14 04:26		

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

**Sample: TB-075034-092514-CM-001**    **Lab ID: 60178875006**    Collected: 09/25/14 15:45    Received: 09/26/14 08:40    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		10/03/14 15:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 15:28	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 15:28	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 15:28	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	101 %		80-120	1		10/03/14 15:28	2037-26-5	
4-Bromofluorobenzene (S)	100 %		80-120	1		10/03/14 15:28	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		80-120	1		10/03/14 15:28	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		10/03/14 15:28		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

QC Batch: MPRP/29159 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

METHOD BLANK: 1452839 Matrix: Water  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	10/03/14 15:09	
Selenium, Dissolved	ug/L	ND	15.0	10/03/14 15:09	

LABORATORY CONTROL SAMPLE: 1452840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	951	95	80-120	
Selenium, Dissolved	ug/L	1000	930	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1452841 1452842

Parameter	Units	60178712001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	ug/L	2.2 mg/L	1000	1000	3240	3290	101	106	75-125	2	20	
Selenium, Dissolved	ug/L	ND	1000	1000	988	1000	99	100	75-125	1	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

QC Batch: MSV/64820

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60178875006

METHOD BLANK: 1453517

Matrix: Water

Associated Lab Samples: 60178875006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/03/14 13:02	
Ethylbenzene	ug/L	ND	1.0	10/03/14 13:02	
Toluene	ug/L	ND	1.0	10/03/14 13:02	
Xylene (Total)	ug/L	ND	3.0	10/03/14 13:02	
1,2-Dichloroethane-d4 (S)	%	95	80-120	10/03/14 13:02	
4-Bromofluorobenzene (S)	%	96	80-120	10/03/14 13:02	
Toluene-d8 (S)	%	98	80-120	10/03/14 13:02	

LABORATORY CONTROL SAMPLE: 1453518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.3	106	80-120	
Ethylbenzene	ug/L	20	21.7	109	80-121	
Toluene	ug/L	20	21.0	105	80-122	
Xylene (Total)	ug/L	60	62.9	105	80-121	
1,2-Dichloroethane-d4 (S)	%			92	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			99	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

QC Batch: WETA/31261 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

METHOD BLANK: 1455423 Matrix: Water  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/08/14 15:11	

LABORATORY CONTROL SAMPLE: 1455424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1455425 1455426

Parameter	Units	60178874001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	50	50	57.9	50.4	98	83	80-120	14	15	

MATRIX SPIKE SAMPLE: 1455427

Parameter	Units	60178912001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	311	100	414	103	80-120	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

QC Batch: WETA/31142 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

METHOD BLANK: 1449848 Matrix: Water  
 Associated Lab Samples: 60178875001, 60178875002, 60178875003, 60178875004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	09/26/14 16:21	

LABORATORY CONTROL SAMPLE: 1449849

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	105	85-115	

MATRIX SPIKE SAMPLE: 1449850

Parameter	Units	60178871001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	17.6	16	32.2	91	85-115	

MATRIX SPIKE SAMPLE: 1449851

Parameter	Units	60178873001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	11.6	8	18.4	85	85-115	

SAMPLE DUPLICATE: 1449852

Parameter	Units	60178875001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	4.4	4.4	1	20	

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## QUALIFIERS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/64773

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/64820

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60178875

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60178875001	GW-075034-092514-CM-MW-1	EPA 3010	MPRP/29159	EPA 6010	ICP/21937
60178875002	GW-075034-092514-CM-MW-8R	EPA 3010	MPRP/29159	EPA 6010	ICP/21937
60178875003	GW-075034-092514-CM-MW-7	EPA 3010	MPRP/29159	EPA 6010	ICP/21937
60178875004	GW-075034-092514-CM-MW-4	EPA 3010	MPRP/29159	EPA 6010	ICP/21937
60178875001	GW-075034-092514-CM-MW-1	EPA 8260	MSV/64773		
60178875002	GW-075034-092514-CM-MW-8R	EPA 8260	MSV/64773		
60178875003	GW-075034-092514-CM-MW-7	EPA 8260	MSV/64773		
60178875004	GW-075034-092514-CM-MW-4	EPA 8260	MSV/64773		
60178875005	GW-075034-092514-CM-DUP	EPA 8260	MSV/64773		
60178875006	TB-075034-092514-CM-001	EPA 8260	MSV/64820		
60178875001	GW-075034-092514-CM-MW-1	EPA 300.0	WETA/31261		
60178875002	GW-075034-092514-CM-MW-8R	EPA 300.0	WETA/31261		
60178875003	GW-075034-092514-CM-MW-7	EPA 300.0	WETA/31261		
60178875004	GW-075034-092514-CM-MW-4	EPA 300.0	WETA/31261		
60178875001	GW-075034-092514-CM-MW-1	EPA 353.2	WETA/31142		
60178875002	GW-075034-092514-CM-MW-8R	EPA 353.2	WETA/31142		
60178875003	GW-075034-092514-CM-MW-7	EPA 353.2	WETA/31142		
60178875004	GW-075034-092514-CM-MW-4	EPA 353.2	WETA/31142		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60178875**



Client Name: LOP CRANM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 6113 5280 1784 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-239 / T-194

Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 3.4

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: LW 9/29/14

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>NO<sub>3</sub></u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WK</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>081814-382m</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AAF

Date: 9/29/14



January 06, 2015

Christine Mathews  
CRA  
6121 Indian School Rd NE  
Suite 200  
Albuquerque, NM 87110

RE: Project: 075034 SAN JUAN 29-7 UNIT 37  
Pace Project No.: 60184723

Dear Christine Mathews:

Enclosed are the analytical results for sample(s) received by the laboratory on December 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, COP Conestoga-Rovers & Associa  
Angela Bown, Conestoga Rovers & Associates  
Chris Fetters, COP Conestoga-Rovers & Associa  
Jeff Walker, COP Conestoga-Rovers & Associa



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60184723001	GW-075034-121614-CM-MW-6	Water	12/16/14 10:05	12/17/14 09:30
60184723002	GW-075034-121614-CM-MW-2	Water	12/16/14 10:40	12/17/14 09:30
60184723003	GW-075034-121614-CM-MW-1	Water	12/16/14 11:15	12/17/14 09:30
60184723004	GW-075034-121614-CM-MW-3	Water	12/16/14 11:45	12/17/14 09:30
60184723005	GW-075034-121614-CM-MW-8R	Water	12/16/14 12:15	12/17/14 09:30
60184723006	GW-075034-121614-CM-MW-5	Water	12/16/14 13:00	12/17/14 09:30
60184723007	GW-075034-121614-CM-MW-7	Water	12/16/14 14:05	12/17/14 09:30
60184723008	GW-075034-121614-CM-MW-4	Water	12/16/14 14:50	12/17/14 09:30
60184723009	GW-075034-121614-CM-MW-DUP	Water	12/16/14 08:00	12/17/14 09:30
60184723010	TB-075034-121614-CM-MW-001	Water	12/16/14 16:30	12/17/14 09:30

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60184723001	GW-075034-121614-CM-MW-6	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723002	GW-075034-121614-CM-MW-2	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723003	GW-075034-121614-CM-MW-1	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723004	GW-075034-121614-CM-MW-3	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723005	GW-075034-121614-CM-MW-8R	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723006	GW-075034-121614-CM-MW-5	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723007	GW-075034-121614-CM-MW-7	EPA 6010	SMW	2
		EPA 8260	RAB	8
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723008	GW-075034-121614-CM-MW-4	EPA 6010	SMW	2
		EPA 8260	RAB	8

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### SAMPLE ANALYTE COUNT

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C	JML	1
		EPA 300.0	TDB	1
		EPA 353.2	JML	1
60184723009	GW-075034-121614-CM-MW-DUP	EPA 8260	RAB	8
60184723010	TB-075034-121614-CM-MW-001	EPA 8260	RAB	8

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** CRA Conoco New Mexico

**Date:** January 06, 2015

**General Information:**

8 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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**Method:** EPA 8260

**Description:** 8260 MSV UST, Water

**Client:** CRA Conoco New Mexico

**Date:** January 06, 2015

**General Information:**

10 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** CRA Conoco New Mexico

**Date:** January 06, 2015

**General Information:**

8 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** CRA Conoco New Mexico

**Date:** January 06, 2015

**General Information:**

8 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres

**Client:** CRA Conoco New Mexico

**Date:** January 06, 2015

**General Information:**

8 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/32225

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60184710005,60184717001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1495979)
- Nitrogen, Nitrate

QC Batch: WETA/32226

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60184674005,60184714002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1496004)
- Nitrogen, Nitrate

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-6      **Lab ID:** 60184723001      Collected: 12/16/14 10:05      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	147	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:33	7439-96-5	
Selenium, Dissolved	34.3	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:33	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	1.4	ug/L	1.0	1		12/19/14 06:06	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 06:06	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 06:06	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 06:06	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		12/19/14 06:06	2037-26-5	
4-Bromofluorobenzene (S)	99	%	80-120	1		12/19/14 06:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		12/19/14 06:06	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 06:06		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	1830	mg/L	5.0	1		12/22/14 17:09		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1000	mg/L	100	100		01/05/15 13:28	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	27.2	mg/L	1.0	10		12/18/14 07:44		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-2      **Lab ID:** 60184723002      Collected: 12/16/14 10:40      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	<b>746</b>	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:36	7439-96-5	
Selenium, Dissolved	<b>71.5</b>	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:36	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 06:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 06:21	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 06:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 06:21	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100 %		80-120	1		12/19/14 06:21	2037-26-5	
4-Bromofluorobenzene (S)	97 %		80-120	1		12/19/14 06:21	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		80-120	1		12/19/14 06:21	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		12/19/14 06:21		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2360</b>	mg/L	5.0	1		12/22/14 17:09		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1380</b>	mg/L	100	100		01/05/15 14:13	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>31.0</b>	mg/L	2.0	20		12/18/14 06:56		

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### ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-1    **Lab ID:** 60184723003    Collected: 12/16/14 11:15    Received: 12/17/14 09:30    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	<b>1490</b>	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:38	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:38	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 06:37	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 06:37	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 06:37	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 06:37	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		12/19/14 06:37	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		12/19/14 06:37	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120	1		12/19/14 06:37	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		12/19/14 06:37		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2410</b>	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1580</b>	mg/L	100	100		01/05/15 15:12	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>2.9</b>	mg/L	0.10	1		12/17/14 16:28		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-3      **Lab ID:** 60184723004      Collected: 12/16/14 11:45      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	2060	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:47	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:47	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 06:53	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 06:53	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 06:53	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 06:53	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	97	%	80-120	1		12/19/14 06:53	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		12/19/14 06:53	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/19/14 06:53	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 06:53		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2110	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1210	mg/L	100	100		01/05/15 15:27	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	6.1	mg/L	0.20	2		12/18/14 07:02		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-8R      **Lab ID:** 60184723005      Collected: 12/16/14 12:15      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	<b>1010</b>	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:55	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:55	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	<b>187</b>	ug/L	1.0	1		12/19/14 07:09	71-43-2	
Ethylbenzene	<b>24.8</b>	ug/L	1.0	1		12/19/14 07:09	100-41-4	
Toluene	<b>301</b>	ug/L	5.0	5		12/21/14 04:29	108-88-3	
Xylene (Total)	<b>368</b>	ug/L	15.0	5		12/21/14 04:29	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100 %		80-120	1		12/19/14 07:09	2037-26-5	
4-Bromofluorobenzene (S)	98 %		80-120	1		12/19/14 07:09	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		12/19/14 07:09	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		12/19/14 07:09		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>2440</b>	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	<b>1470</b>	mg/L	100	100		01/05/15 15:42	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	<b>13.0</b>	mg/L	0.50	5		12/18/14 07:20		

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### ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-5      **Lab ID:** 60184723006      Collected: 12/16/14 13:00      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Manganese, Dissolved	70.6	ug/L	5.0	1	12/23/09 05:00	12/26/14 10:57	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	12/23/09 05:00	12/26/14 10:57	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 07:24	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 07:24	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 07:24	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 07:24	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		12/19/14 07:24	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1		12/19/14 07:24	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120	1		12/19/14 07:24	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 07:24		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2710	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1790	mg/L	200	200		01/05/15 15:57	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	0.13	mg/L	0.10	1		12/17/14 16:59		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-7      **Lab ID:** 60184723007      Collected: 12/16/14 14:05      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	435	ug/L	5.0	1	12/23/09 05:00	12/26/14 11:00	7439-96-5	
Selenium, Dissolved	ND	ug/L	15.0	1	12/23/09 05:00	12/26/14 11:00	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	1.3	ug/L	1.0	1		12/19/14 07:40	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 07:40	100-41-4	
Toluene	3.1	ug/L	1.0	1		12/19/14 07:40	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 07:40	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	99 %		80-120	1		12/19/14 07:40	2037-26-5	
4-Bromofluorobenzene (S)	99 %		80-120	1		12/19/14 07:40	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		80-120	1		12/19/14 07:40	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 07:40		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2610	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	2140	mg/L	200	200		01/05/15 16:12	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	3.9	mg/L	0.10	1		12/17/14 17:02		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-4      **Lab ID:** 60184723008      Collected: 12/16/14 14:50      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Manganese, Dissolved	15.5	ug/L	5.0	1	12/23/09 05:00	12/26/14 11:02	7439-96-5	
Selenium, Dissolved	31.4	ug/L	15.0	1	12/23/09 05:00	12/26/14 11:02	7782-49-2	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 07:56	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 07:56	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 07:56	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 07:56	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	97	%	80-120	1		12/19/14 07:56	2037-26-5	
4-Bromofluorobenzene (S)	97	%	80-120	1		12/19/14 07:56	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/19/14 07:56	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 07:56		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	2250	mg/L	5.0	1		12/22/14 17:10		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Sulfate	1330	mg/L	100	100		01/05/15 16:27	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2						
Nitrogen, Nitrate	6.8	mg/L	0.20	2		12/18/14 07:13		

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** GW-075034-121614-CM-MW-DUP    **Lab ID:** 60184723009    Collected: 12/16/14 08:00    Received: 12/17/14 09:30    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	195	ug/L	1.0	1		12/19/14 08:11	71-43-2	
Ethylbenzene	24.6	ug/L	1.0	1		12/19/14 08:11	100-41-4	
Toluene	283	ug/L	5.0	5		12/21/14 04:44	108-88-3	
Xylene (Total)	353	ug/L	15.0	5		12/21/14 04:44	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	99	%	80-120	1		12/19/14 08:11	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1		12/19/14 08:11	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120	1		12/19/14 08:11	17060-07-0	
Preservation pH	1.0		1.0	1		12/19/14 08:11		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

**Sample:** TB-075034-121614-CM-MW-001      **Lab ID:** 60184723010      Collected: 12/16/14 16:30      Received: 12/17/14 09:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		12/19/14 08:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/19/14 08:27	100-41-4	
Toluene	ND	ug/L	1.0	1		12/19/14 08:27	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/19/14 08:27	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		80-120	1		12/19/14 08:27	2037-26-5	
4-Bromofluorobenzene (S)	97 %		80-120	1		12/19/14 08:27	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		12/19/14 08:27	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	1		12/19/14 08:27		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Project No.: 60184723

QC Batch: MPRP/30285 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60184723001, 60184723002, 60184723003, 60184723004, 60184723005, 60184723006, 60184723007, 60184723008

METHOD BLANK: 1499114 Matrix: Water  
 Associated Lab Samples: 60184723001, 60184723002, 60184723003, 60184723004, 60184723005, 60184723006, 60184723007, 60184723008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	ug/L	ND	5.0	12/26/14 10:29	
Selenium, Dissolved	ug/L	ND	15.0	12/26/14 10:29	

LABORATORY CONTROL SAMPLE: 1499115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	ug/L	1000	1030	103	80-120	
Selenium, Dissolved	ug/L	1000	1020	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1499116 1499117

Parameter	Units	60184723003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	ug/L	1490	1000	1000	2480	2460	98	97	75-125	1	20	
Selenium, Dissolved	ug/L	ND	1000	1000	1080	1070	108	107	75-125	1	20	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

QC Batch: MSV/66627 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
 Associated Lab Samples: 60184723005, 60184723009

METHOD BLANK: 1498083 Matrix: Water

Associated Lab Samples: 60184723005, 60184723009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	ND	1.0	12/21/14 04:13	
Xylene (Total)	ug/L	ND	3.0	12/21/14 04:13	
1,2-Dichloroethane-d4 (S)	%	106	80-120	12/21/14 04:13	
4-Bromofluorobenzene (S)	%	94	80-120	12/21/14 04:13	
Toluene-d8 (S)	%	96	80-120	12/21/14 04:13	

LABORATORY CONTROL SAMPLE: 1498084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene	ug/L	20	18.8	94	80-120	
Xylene (Total)	ug/L	60	60.9	101	80-120	
1,2-Dichloroethane-d4 (S)	%			104	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1498085 1498086

Parameter	Units	60184774004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Toluene	ug/L	ND	20	20	17.1	18.4	84	90	47-149	7	16		
Xylene (Total)	ug/L	ND	60	60	55.5	59.0	93	98	39-158	6	15		
1,2-Dichloroethane-d4 (S)	%						110	108	80-120				
4-Bromofluorobenzene (S)	%						95	97	80-120				
Toluene-d8 (S)	%						96	96	80-120				

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

QC Batch: WETA/32389

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60184723001, 60184723002, 60184723003, 60184723004, 60184723005, 60184723006, 60184723007, 60184723008

METHOD BLANK: 1501935

Matrix: Water

Associated Lab Samples: 60184723001, 60184723002, 60184723003, 60184723004, 60184723005, 60184723006, 60184723007, 60184723008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	01/02/15 16:31	

METHOD BLANK: 1502473

Matrix: Water

Associated Lab Samples: 60184723001, 60184723002, 60184723003, 60184723004, 60184723005, 60184723006, 60184723007, 60184723008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	01/05/15 12:58	

LABORATORY CONTROL SAMPLE: 1501936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	90-110	

LABORATORY CONTROL SAMPLE: 1502474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1501937 1501938

Parameter	Units	60184723001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Sulfate	mg/L	1000	500	500	1550	1570	109	112	80-120	1	15	

MATRIX SPIKE SAMPLE: 1501939

Parameter	Units	60184723002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	1380	500	1970	116	80-120	

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

QC Batch: WETA/32225 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
 Associated Lab Samples: 60184723001, 60184723002, 60184723003

METHOD BLANK: 1495975 Matrix: Water

Associated Lab Samples: 60184723003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/17/14 16:04	

METHOD BLANK: 1499497 Matrix: Water

Associated Lab Samples: 60184723001, 60184723002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/18/14 07:11	

LABORATORY CONTROL SAMPLE: 1495976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.8	112	85-115	

LABORATORY CONTROL SAMPLE: 1499498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	109	85-115	

MATRIX SPIKE SAMPLE: 1495977

Parameter	Units	60184710005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L		5.8	8	14.1	104	85-115

MATRIX SPIKE SAMPLE: 1495979

Parameter	Units	60184717001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L		43.5	32	70.3	84	85-115 M1

SAMPLE DUPLICATE: 1495978

Parameter	Units	60184726004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L		0.88	.048J		20

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### QUALITY CONTROL DATA

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

QC Batch: WETA/32226

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 60184723004, 60184723005

METHOD BLANK: 1496002

Matrix: Water

Associated Lab Samples: 60184723004, 60184723005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/17/14 16:29	

METHOD BLANK: 1499508

Matrix: Water

Associated Lab Samples: 60184723004, 60184723005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/18/14 07:11	

LABORATORY CONTROL SAMPLE: 1496003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.8	113	85-115	

LABORATORY CONTROL SAMPLE: 1499509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	109	85-115	

MATRIX SPIKE SAMPLE: 1496004

Parameter	Units	60184714002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.3	1.6	4.0	43	85-115	M1

MATRIX SPIKE SAMPLE: 1496006

Parameter	Units	60184674005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5.7	3.2	9.1	108	85-115	

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**QUALITY CONTROL DATA**

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

QC Batch: WETA/32227 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
 Associated Lab Samples: 60184723006, 60184723007, 60184723008

METHOD BLANK: 1496008 Matrix: Water

Associated Lab Samples: 60184723006, 60184723007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/17/14 16:56	

METHOD BLANK: 1499527 Matrix: Water

Associated Lab Samples: 60184723008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	12/18/14 07:11	

LABORATORY CONTROL SAMPLE: 1496009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.8	110	85-115	

LABORATORY CONTROL SAMPLE: 1499528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.7	109	85-115	

MATRIX SPIKE SAMPLE: 1496010

Parameter	Units	60184714009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L		1.2	1.6	2.9	103	85-115

MATRIX SPIKE SAMPLE: 1496012

Parameter	Units	60184712004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L		5.6	3.2	8.4	85	85-115

SAMPLE DUPLICATE: 1496011

Parameter	Units	60184712008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L		1.7	1.7	0	20

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## QUALIFIERS

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60184723001	GW-075034-121614-CM-MW-6	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723002	GW-075034-121614-CM-MW-2	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723003	GW-075034-121614-CM-MW-1	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723004	GW-075034-121614-CM-MW-3	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723005	GW-075034-121614-CM-MW-8R	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723006	GW-075034-121614-CM-MW-5	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723007	GW-075034-121614-CM-MW-7	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723008	GW-075034-121614-CM-MW-4	EPA 3010	MPRP/30285	EPA 6010	ICP/22641
60184723001	GW-075034-121614-CM-MW-6	EPA 8260	MSV/66592		
60184723002	GW-075034-121614-CM-MW-2	EPA 8260	MSV/66592		
60184723003	GW-075034-121614-CM-MW-1	EPA 8260	MSV/66592		
60184723004	GW-075034-121614-CM-MW-3	EPA 8260	MSV/66592		
60184723005	GW-075034-121614-CM-MW-8R	EPA 8260	MSV/66592		
60184723005	GW-075034-121614-CM-MW-8R	EPA 8260	MSV/66627		
60184723006	GW-075034-121614-CM-MW-5	EPA 8260	MSV/66592		
60184723007	GW-075034-121614-CM-MW-7	EPA 8260	MSV/66592		
60184723008	GW-075034-121614-CM-MW-4	EPA 8260	MSV/66592		
60184723009	GW-075034-121614-CM-MW-DUP	EPA 8260	MSV/66592		
60184723009	GW-075034-121614-CM-MW-DUP	EPA 8260	MSV/66627		
60184723010	TB-075034-121614-CM-MW-001	EPA 8260	MSV/66592		
60184723001	GW-075034-121614-CM-MW-6	SM 2540C	WET/52187		
60184723002	GW-075034-121614-CM-MW-2	SM 2540C	WET/52187		
60184723003	GW-075034-121614-CM-MW-1	SM 2540C	WET/52187		
60184723004	GW-075034-121614-CM-MW-3	SM 2540C	WET/52187		
60184723005	GW-075034-121614-CM-MW-8R	SM 2540C	WET/52187		
60184723006	GW-075034-121614-CM-MW-5	SM 2540C	WET/52187		
60184723007	GW-075034-121614-CM-MW-7	SM 2540C	WET/52187		
60184723008	GW-075034-121614-CM-MW-4	SM 2540C	WET/52187		
60184723001	GW-075034-121614-CM-MW-6	EPA 300.0	WETA/32389		
60184723002	GW-075034-121614-CM-MW-2	EPA 300.0	WETA/32389		
60184723003	GW-075034-121614-CM-MW-1	EPA 300.0	WETA/32389		
60184723004	GW-075034-121614-CM-MW-3	EPA 300.0	WETA/32389		
60184723005	GW-075034-121614-CM-MW-8R	EPA 300.0	WETA/32389		
60184723006	GW-075034-121614-CM-MW-5	EPA 300.0	WETA/32389		
60184723007	GW-075034-121614-CM-MW-7	EPA 300.0	WETA/32389		
60184723008	GW-075034-121614-CM-MW-4	EPA 300.0	WETA/32389		
60184723001	GW-075034-121614-CM-MW-6	EPA 353.2	WETA/32225		
60184723002	GW-075034-121614-CM-MW-2	EPA 353.2	WETA/32225		
60184723003	GW-075034-121614-CM-MW-1	EPA 353.2	WETA/32225		
60184723004	GW-075034-121614-CM-MW-3	EPA 353.2	WETA/32226		
60184723005	GW-075034-121614-CM-MW-8R	EPA 353.2	WETA/32226		
60184723006	GW-075034-121614-CM-MW-5	EPA 353.2	WETA/32227		
60184723007	GW-075034-121614-CM-MW-7	EPA 353.2	WETA/32227		
60184723008	GW-075034-121614-CM-MW-4	EPA 353.2	WETA/32227		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075034 SAN JUAN 29-7 UNIT 37

Pace Project No.: 60184723

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
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### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt  
ESI Tech Spec Client**

**WO# : 60184723**  
  
 60184723

Client Name: GP CRANM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 6162 7064 4736 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 0.7

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: js 12/17/14 / 1051

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>M3</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>water</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>js</u> Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>120114-3</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: <u>APT</u>

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AAF Date: 12/17/14

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1040</u>	Start:
End: <u>1045</u>	End:
Temp:	Temp:

